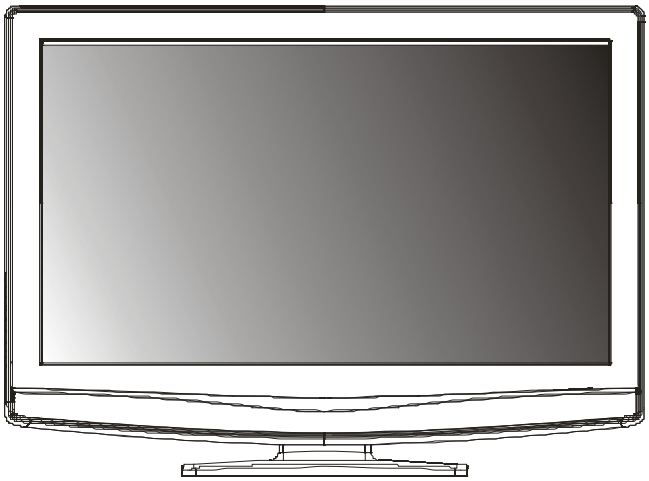
SERVICE MANUAL

8M89A/E CHASSIS



Design and specifications are subject to change without prior notice.
(Only Referrence)

SIZE:A5

Description: SERVICE MANUAL 8M89A/E	
MODEL.	Brand Name:
JOB NO.	SKYWORTH
Engineering Dept:	
Artwork By:	Date: 2010-9-2
Checked By:	Date:
Approved By:	Date:

Content

Content----------2
Technical Specification----------3-8
ATV/DTV-Productoins Specification----------9-12
MSD306 black diagram of system components Australia----------13
MSD306 black diagram of system components Europe----------14
List of long-time components and materials----------15
List of key parts----------16-20
PCB - POWER(Front)----------21
PCB - POWER(Back)----------22
MAIN PCB-TOP----------23
MAIN PCB-BOT----------24
Circuit Diagrams----------25-32
Service Adjustments----------33
Software Update(USB)----------34
Service Flow Chart----------35-37

Technical Specification

1.Application Area:

This product standard is used for LCD 8M89A/E chassis.

2.Specification:

All the standard are measured under following conditions without other specification.

2.1 Ambient Temperature:20+/-5℃

2.2 Relative Humidity:65+/-10%

2.3 Power Supply Voltage: Standard Input Voltage(100V~240Vac 50/60Hz)

2.4 Adjust after 20 minutes warm-up.

3.Test and check method:

3.1 Capability:According to nation test standard

3.2 Safety:_____ standard

EMC:_____ standard

4. Safety and Regulation

No	Item	Min	Typ	Max	Unit	Remark
1.	Force Stability - Incline Plane Tip Test		10		deg	
2.	Force Stability - Level Tip Test		100		N	
3.	Isolation Gap, AC-AC/ AC-DC	3			mm	
4.	Isolation Gap	6			mm	
5.	Power Consumption, Max		70		W	For 22LED
			90		W	For 24LED
			120		W	For 32LCD
6.	Power Consumption, Stand by			1	W	
7.	Dielectric Voltage	3			kV	
8.	Isolation Resistance	4			MΩ	
9.	Leakage Current		5		mApp	
10.	Power Cord Captivity		40		N	
11.	Flammability - Back Cover		PASS			
12.	Sharp Edge		PASS			
13.	UL Compliance		NO			
14.	FCC Compliance		NO			
15.	CDRH Radiation Compliance		NO			
16.	CSA Compliance		NO			
17.	CEB Compliance		NO			
18.	CE Compliance		NO			
19.	CB Compliance		YES			

5. Video

No	Item	Min	Typ	Max	Unit	Remark
1.	Linearity Distortion, Vertical		1		%	
2.	Linearity Distortion, Horizontal		1		%	
3.	Trapezoidal Distortion, Vertical		1		%	
4.	Trapezoidal Distortion, Horizontal		1		%	
5.	Over Scan, Vertical	90	93	95	%	
6.	Over Scan, Horizontal	90	93	95	%	
7.	Brightness, Maximum		250		cd/m^2	For 22LED
			300		cd/m^2	For 24LED
			350		cd/m^2	For 32LCD
8.	Video Noise Limited Sensitivity(@S/N=30db) VHF			51	dBUV	
9.	Video Noise Limited Sensitivity(@S/N=30db) UHF			54	dBUV	

10.	Selectivity -1.5M	35			dB	
11.	Selectivity +8M	40			dB	
12.	Tuning Range	-0.7			MHz	
13.	Resolution Horizontal		1366		Lines	1920 For (32LCD)
14.	Resolution Vertical		768		Lines	1080 For (32LCD)

6. Chroma

No	Item	Min	Typ	Max	Unit	Remark
1.	White Balance, X axis		280			
2.	White Balance, Y axis		290			
3.	White Balance, Color Temperature	6500	9300	13000	kdeg	13000kdeg(268,273) 9300(281,311) 6500(313,329)
4.	Color Sensitivity		30		dB	
5.	Color Burst Lock-in Range	+/-300			Hz	
6.	Color Killer Sensitivity		30		dBuv	

7. Audio

No	Item	Min	Typ	Max	Unit	Remark
1.	Audio Noise Limited Sensitivity, VHF-L		25		dBuv	
2.	Audio Noise Limited Sensitivity, VHF-H		25		dBuv	
3.	Audio Noise Limited Sensitivity, UHF		28		dBuv	
4.	Buzz (S/N Ratio)		40		dB	
5.	Distortion		3		%	
6.	Audio Output, L/R,at 10% THD		10		W	
7.	Audio Output, Center		10		W	
8.	Stereo Separation		21		dB	
9.	Speaker Impedance		8		ohm	(22" 24" is 4 ohm)
10.	Speaker Power Rating		5	8	W	(22" 24" is 3W x 2)

8. Power

No	Item	Min	Typ	Max	Unit	Remark
1.	DC Voltage, Audio		24		V	22" 24" is 12V
2.	DC Voltage, Tuner(5)		5		V	

9. External Interface

No	Item	Min	Typ	Max	Unit	Remark
1.	Video Input Level		1		Vpp	75 OHM
2.	Video Input Frequency Response	4.5			MHz	
3.	Video Input S/N		40		dB	
4.	Audio Input Level		0.5		Vrms	
5.	Audio Input Frequency Response			15	kHz	
6.	Audio Input S/N		40		dB	
7.	Audio Input Distortion		3		%	
8.	Audio Input Dynamic Range			2	V	
9.	Video Output Level		1		Vpp	
10.	Video Output Frequency Response		4.2		MHz	
11.	Video Output S/N		50		dB	
12.	Audio Output Level		0.5		Vrms	
13.	Audio Output Frequency Response	80		12000	Hz	
14.	Audio Output S/N		40		dB	
15.	Audio Output Distortion		6		%	

16.	Video Input Level, R/G/B		0.7		Vpp	
17.	Video Input Level, Component(Y, P_B, P_R)		0.7		Vpp	75 ohm
18.	RGB Input Resolution, Vertical		768		pixel	1080
19.	RGB Input Resolution, Horizontal		1366		pixel	1920
20.	RGB Input Horizontal Frequency		68		kHz	
21.	RGB Input Frame Rate		60		Hz	

10. The others

No	Item	Min	Typ	Max	Unit	Remark
1.	Search Sensitivity		40		dBuv	
2.	Clock, real time gain or loss (sec per day)		NO		sec	
3.	Soft Ware Functionality Test		YES			
4.	REMOCON Working Sensitivity, Straight		8		m	
5.	REMOCON Working Sensitivity, T/B/L/R		6		m	
6.	Closed Caption Sensitivity		46		dBuv	
7.	Teletext Sensitivity		46		dBm	
8.	Resonance of unit (Sweep freq : 50 ~ 1000)		NO			

11. Customer Menu Setup (as shipped condition)

No	Item	Specification	Remark
1.	PSM	Standard	
2.	SSM	Standard	
3.	Volume	20	
4.	Mute	Off	
5.	Input Mode	RF	
6.	Customer Menu Language	English	
7.	AVL	Off	
8.	Sleep Timer	Off	
9.	Auto Sleep	Off	
10.	Blue Back	Off	
11.	Surround	Off	
12.	Caption	Off	
13.	Noise Reducer	Middle	

1 . Reliability

No	Item	Min	Typ	Max	Unit	Remark
1.	ESD			4	kV	IEC-1000-4-2
2.	EFT/Burst			2	kV	IEC-1000-4-4
3.	Surge Immunity			4	kV	IEC-1000-4--5
4.	Voltage Dip Test, 10ms	0	40	70	%	IEC-1000-4-11
5.	Voltage Dip Test, 100ms	0	40	70	%	IEC-1000-4—11
6.	Operation Temperature	0		40	deg	
7.	Operation Humidity	40		85	%	
8.	Storage Temperature	-20		50	deg	
9.	MTBF (Confidence Level : 90 %)		30000		hour	

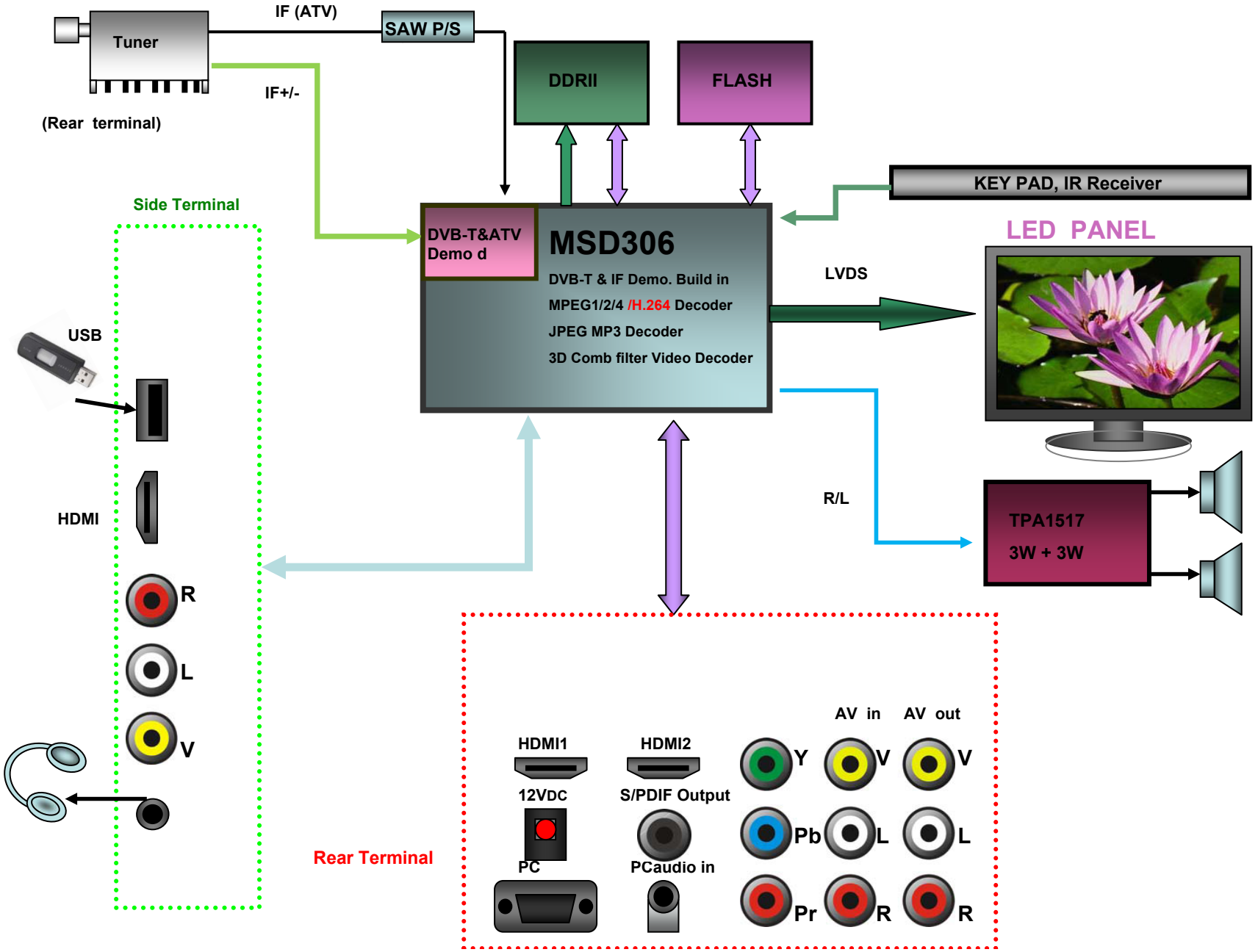
ATV/DTV-PRODUCTI0 NS SPECIFICATION

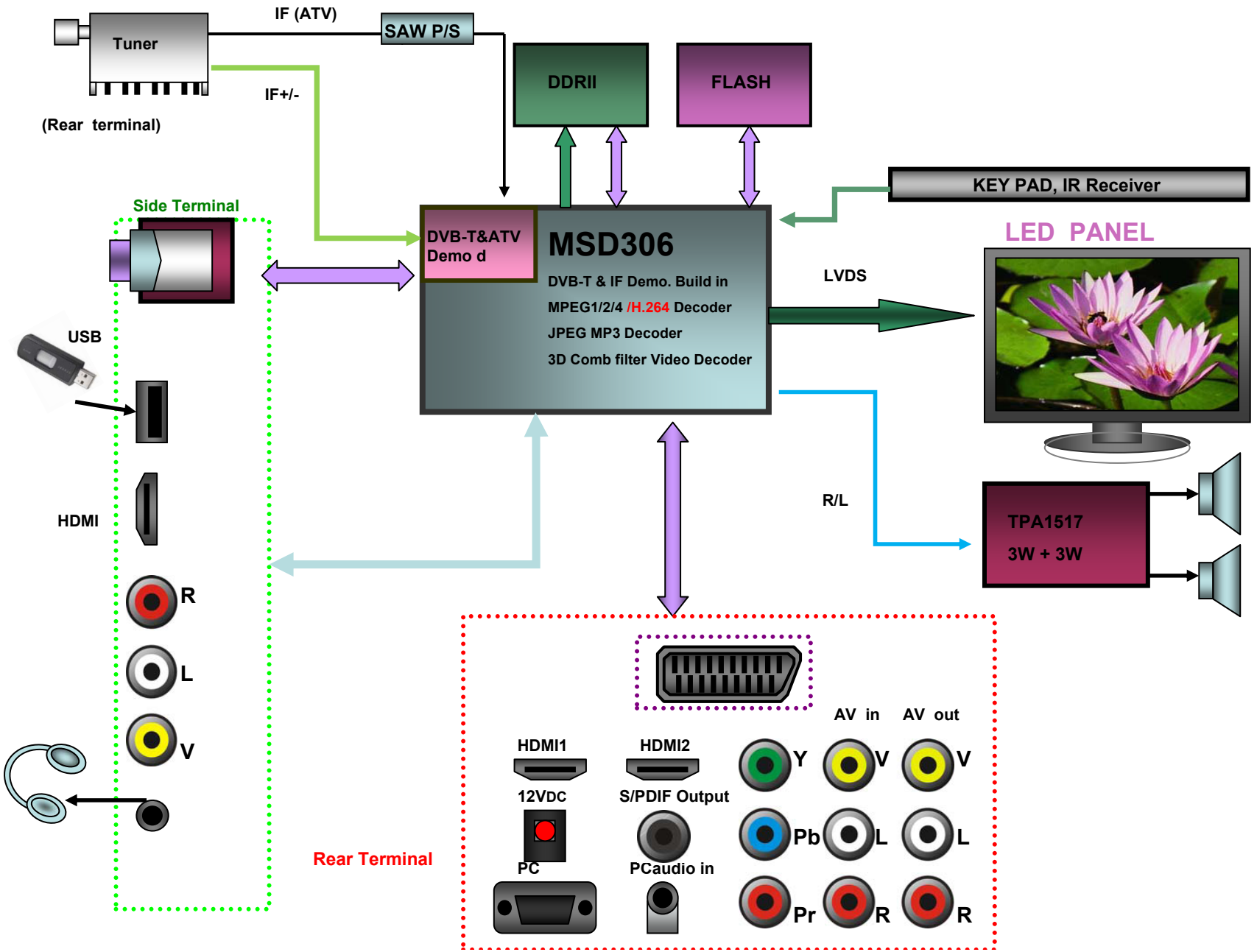
Model #	19"～26" LED 32LCD	
Country (West Eu../Russia/AP/US/S.A...)	Australia	Europe
Brand	Skyworth	Skyworth
Category (Monitor/TV/Combo/Portable TV…)	TV	TV
Panel technology (LCD / PDP/LED)	LCD / LED	LCD / LED
Market Position (High/Mid/Access,,,)	Class	Class
Cabinet Design (Example: 01,23 series)	32S16/24E60/22E60/19E61	32S16/24E60/22E60/19E61
Chassis solution	MSD306	MSD306
Chassis name	8M39A	8M39E
Chassis PCB Standard	Skyworth RGB New Standard	Skyworth RGB New Standard
MP date	2010.9	2010.9
Chassis BOM Costing Target	17.5USD	18USD
Built-in Power supply BOM Costing Target	-	-
Regional requirement		
Homologation (Gostandard/CE/MPTT/CB/…)	CB /EMC	CB /EMC
Rohs	yes	yes
Power supply(AC +10/-20%/...)	100-240V AC (-20%,+10%)	100-240V AC (-20%,+10%)
Power consumption working	-	-
Power consumption standby	<1W	<1W
Power plug(VDE/UL/BS/…)	SAA/3 pins	SAA/3 pins
Picture display		
Screen size (inch)	19",22", 24",26",32"	19",22", 24",26",32"
Aspect ratio (16/9 // 4/3 // 15/9)	16:9	16:9
Color depth of chassis (8/10/12 bits)	10bits	10bits
1st panel supplier : panel suppliers	Skyworth	Skyworth
1st panel supplier : panel Model	24inch	24inch
Panel Display Type(MVA/PVA/IPS/…)	TFT LCD	TFT LCD
1st panel supplier : resolution	1920x1080	1920x1080
1st panel supplier : pixel Pitch (mmxmm)		
1st panel supplier : Horizontal and vertical viewing angle		
1st panel supplier : Typical response time (Grey to Grey)		
1st panel supplier : Typical response time (tr+tf)		
1st panel supplier : Peak white luminance (Nits)		
1st panel supplier : Contrast ratio		
1st panel supplier : Typical panel Life Time (Hours)		
Picture signal process		
Comb Filter (2D/3D)	3D	3D
Noise Reduction (adaptative/3D/…)	3D	3D
Picture improvement (LTI/CTI,BLE,WLE,...)	LTI/CTI	LTI/CTI
Color process (Gama correction/Skin correction /..)	Follow main IC	Follow main IC
Colour preset (Cool/Normal/Warm/Personal)	Neutral, Cool, Warm and Personal in PC mode	Neutral, Cool, Warm and Personal in PC mode
Picture control (Bright/Con./Sharpness/Color/Tint/..)	Yes	Yes
Picture presets : Standard / Bright / Soft / User	Personal/Mild/Dynamic/Standard	Personal/Mild/Dynamic/Standard
Picture freeze	yes(Hold)	yes(Hold)

Multi picture : PIP/POP (AV)	No	No
Dynamic Backlight Control	yes	yes
Deinterlacer (No/linerar/motion adaptive/motion compensative)	3D motion adaptive	3D motion adaptive
Film mode / reverse 3:2/2:2 pull down	Yes / Yes	Yes / Yes
Full HD support (1080P)	yes	yes
Single scan / Dual scan (120HZ)	no	no
16/9 autoformat (black bars canceller)		
Zoom type : 4/3 format	Yes	Yes
Zoom type : 14/9 Zoom	**NO**	**NO**
Zoom type : 16/9 Zoom	16/9 ZOOM 1	16/9 ZOOM 1
Zoom type : 16/9 Zoom up/down	16/9 ZOOM 2	16/9 ZOOM 2
Zoom type : Cinerama	Yes	Yes
Zoom type : 16/9 Format	Yes	Yes
Zoom type : Auto (by SCART Pin8 and WSS)	No	No
Picture Auto adjustment (PC mode)	Yes	Yes
Sound		
Sound type (AV stereo/Stereo/NICAM/MTS)	AV stereo	
Music Power (Watt)/RMS Power (Watt)	2 x 3W（24'）,2 x 5W（32'）	2 x 3W（24'）,2 x 5W（32'）
Tone control (Bass&Treble / Graphic Equalizer)	Bass&Treble	Bass&Treble
Special sound effect (AVL / WIDE / Pseudo /…)	AVL	AVL
Suround system (Dolby / VD / SRS / BBE / …)	Built-in Surround	Built-in Surround
Sound control (Volume , Balance , Mute)	Volume, Balance, Mute	Volume, Balance, Mute
Sound presets (User/Speech/News/Standard)	Standard / Music / Sports / Movie / Personal	Standard / Music / Sports / Movie / Personal
Headphone volume control (Separated / linked)	**Yes**	**Yes**
Reception and Decoding capability	-	
RF range **(ATV)**	**44.25MHz～863.25MHz**	**44.25MHz～863.25MHz**
RF range **(DTV)**	**177.5MHz～809.5MHz**	**177.5MHz～809.5MHz**
Tuner Input(IEC or F)		
Color System (PAL/SECAM/NTSC/PAL M,N)	PAL/SECAM	PAL/SECAM
Audio Standard (B/G/H/D/K/K'/I/L/L')	BG / DK / I / L	BG / DK / I / L
Video standard NTSC 3.58 / 4.43 (AV)/PAL 60	PAL 4.43	PAL 4.43
DTV support (DVB-T/S/C , ATSC , QAM , …)	DVB-T	DVB-T
HD capability with YPbPr	Yes (720p; 1080i; 1080p@24/50/30Hz; 480i/p; 576i/p)	Yes (720p; 1080i; 1080p@24/50/30Hz; 480i/p; 576i/p)
PC capability (up to maximum format)	Up to 1280X1024 60Hz	Up to 1280X1024 60Hz
HDMI capability （AV/PC Format)	Up to 1080P 24/50/60HZ	Up to 1080P 24/50/60HZ
Compatible video format if DVD/USB: DviX/VCD/SVCD/JPEG/AVI/MPEG2/WMV- HD/SD	JPEG/MPEG2/MPEG4/RMVB/H.264/DivX (depending on license)	JPEG/MPEG2/MPEG4/RMVB/H.264/DivX (depending on license)
Compatible audio format if DVD/USB: MP3/WMA/AAC/MPEG1/…		
Macrovision	yes	yes
User convenience		
OSD Language*	English	English
OSD Transparency Adjust	no	no
OSD Timeout Adjust	no	no

Customer Brand name(LOGO)	yes	yes
IB languages	English	English
Program Numbers (example: 99+3AV input)	99+7AV	99+7AV
Program edit (naming , sorting , skip , swap ….)	Naming / Skip / Swap	Naming / Skip / Swap
Favorite program	yes	yes
Number of buttons on cabinet (Power; Vol+/-; Pr+/-, Menu)	Vol+/-; Pr+/-, Menu ,Source,Power(optional)	Vol+/-; Pr+/-, Menu ,Source,Power(optional)
Main switch button (yes/No)		
CCD（Closed Caption)/ V-CHIP	no	no
Text Standard: (Top, FLOF,,,)		
Teletext Level: 2.5 / 1.5		
Pages for teletext		
Teletext character sets ****		
Sleep timer	10-240 Min.	10-240 Min.
Calendar / Games	no	no
Parent Control - Child lock (set the lock of the keyboard, only the RCU can control the TV)	no	no
No program auto switch off	no	no
Auto update (for DVBT program ugrades)		
Hotel mode (Y/N)	Optional	Optional
Software download(RS232/CI/USB/OAD)	USB	USB
Factory reset	Yes（in factory menu,reset the setting to shipment state ）	Yes（in factory menu,reset the setting to shipment state ）
Quick view	yes	yes
Screen saver	yes	yes
Blue Back	yes	yes
LED indicator(Power on/Standby)	yes	yes
Connectors -Rear		
RF Input (Antenna): Analogical / Digital / 2in1	1 tuner	1 tuner
CINCH video in / out	RCA	RCA
CINCH audio in / out	RCA	RCA IN
Scart : CVBS in&out	no	yes
S-video in	no	no
Component Video Input (YCrCb/YPrPb)	yes	yes
Component Audio Input (YCrCb/YPrPb)	yes	yes
VGA in / Audio L/R in / Jack audio in 3.5mm	VGA + dia. 3.5mm for audio in	VGA + dia. 3.5mm for audio in
HDMI	2	2
Audio input for DVI	same as VGA	same as VGA
CINCH subwoofer out / Coaxial out (S/PDIF)	yes	yes
Headphone output connector (dia.mm)	no	no
USB slot (No/1.1/2)	no	no
DVBC-I (common interface)	no	no
External power converter input	yes	yes
Connectors -Side		
HDMI	1	1
CINCH video in	RCA	RCA
CINCH audio in	RCA	RCA
S-video in	no	no

Component Video Input (YCrCb/YPrPb)	no	no
Component Audio Input (YCrCb/YPrPb)	no	no
Headphone output connector (dia.mm)	yes	yes
USB slot (No/1.1/2)	1 (Software update, JPEG, MP3, WMA, RMVB, DivX) Multimedia depends on license	1 (Software update, JPEG, MP3, WMA, RMVB, DivX) Multimedia depends on license
UI/RC		
UI design (font/pixel, 2D/3D graphic engine..)	SOD Standard	SOD Standard
RC Model	YK76HG	YK76HG
RC system	RGB Standard	RGB Standard
RC # of keys		
Accessories included		
Remote control reference	English	English
IB	English	English
Circuit diagram	No	No
Batteries	yes	yes
AC power cords	Optional	Optional
AC Cable Length	1.5m	1.5m
Wallmount frame	Optional	Optional
General Data		
Size (W x H x D, with stand) in mm	-	
Size (W x H x D, without stand) in mm	-	
Package Size (W x H x D, without stand) in mm	-	
Net Weight in kg	-	
Gross Weight in Kg	-	
Design / Mechanical		
Wallmount VESA compatible (standard reference)		
Adaptor for VESA wallmount compatibility (accessory ref)		
Desktop Stand (included/optionnal + ref/No)		
Finish on Front		
Finish on side		
Finish on back		
Finish on stand		


Tuner
IF (ATV)
SAW P/S
IF+/-
(Rear terminal)
DDRII
FLASH
KEY PAD, IR Receiver
LED PANEL
Side Terminal
DVB-T&ATV Demo d
MSD306
DVB-T & IF Demo. Build in
MPEG1/2/4 /H.264 Decoder
JPEG MP3 Decoder
3D Comb filter Video Decoder
LVDS
USB
HDMI
R
L
V
R/L
TPA1517
3W + 3W
HDMI1
HDMI2
AV in
AV out
12VDC
S/PDIF Output
Y
V
V
PC
PCaudio in
Pb
L
L
Pr
R
R
Rear Terminal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3D Comb filter Video Decoder
LVDS
USB
HDMI
R
L
V
R/L
TPA1517
3W + 3W
Rear Terminal
HDMI1
HDMI2
AV in
AV out
Y
V
V
12VDC
S/PDIF Output
Pb
L
L
PC
PCaudio in
Pr
R
R

NO	Component		Manufacturer / trademark	Type/model	Value / rating	P/N	Approval / Reference	
1	IR	PT1		HS0038**		5300-140038-0010		
2	Speaker							
3	Crystal	Y1	Shanxi yijiayi	HC-49S		4900-124052-05		
4	Tuner	U10A1	Chengdu xuguang	DTT-1081C/GW12B5		5221-389560-0H00		
5	Saw-filter	U30	Ningxia suoteke	HS3611		4900-736115-0X00		
6	All IC	U2	MSTAR	MSD306PT-LF-SG		475C-M30600-3840		
		U9	ELPIDA	EDE5116AJBG-8E-E		478M-E51161-0840		
		U24	CFEON	EN25B64-100FIP		471R-N25640-0160		
		U31	TEXAS/ EUTECH	TPA3113D2 / EUA2113				
		U7	Shenzhen Da yan	LM4558		47DG-G45580-0080		
		U49/ U50	MPS	MP1482DS		476A-M14820-0080		
		U5	Shenzhen Da yan	LM358		47DG-G35800-0080		
		U18	Shenzhen Da yan	LM78D05		47DG-G78051-0030		
		U37	A1 semiconductor	AS1117L-3.3		47B6-A11170-03		
		U38	A1 semiconductor	AS1117L-3.3		47B6-A11170-03		
		U36 /39	A1 semiconductor	AS1117L-1.8		7B6-A11172-03		
		U36	A1 semiconductor	AS1117L-ADJ		47B6-A11174-0300		
		Q33/3 4/35	A1 semiconductor	ASM3403				
		U1	INFINITRUE	IT2418		47AE-T24180-0320		

14	TABLE: list of critical components and materials				P
Component	Manufacturer/ trademark	Type/model	Value / rating	Standard	Approval/ Reference
Mains plug (EU type)	Shen Zhen Xie Kang Electric Co., Ltd.	XK-01	AC 250 V 2,5 A	EN 50075	
Mains plug (EU type) (alternative)	Shenzhen Deren Electronic Co., Ltd.	RVVZ-2P	2,5 A, 250 VAC	EN 50075	
Mains plug (EU type) (alternative)	Various	Various	AC 250 V 2,5 A	EN 50075	S & other EU cert. mark(s)
Mains plug (UK type)	KDJ Quality Electrcal Company Ltd	KDJ 828	AC 250V, 13 A	BS 1363-1	BSI
Mains plug (UK type) (alternative)	Various	Various	AC 250V, 13 A	BS 1363-1	ASTA & other EU cert. mark(s)
Mains plug (AU type)	Shenzhen Deren Electronic Co., Ltd	DR-209	AC 250 V 7,5A	AS/NZS 3112	Australia Cert. Q03980
Power plug (AR type)	Shenzhen Xie Kang Electric Co., Ltd.	XK-19	AC 250 V 10A	IRAM 2063	IRAM
Mains plug (AR type) (alternative)	Various	Various	AC 250V, 10 A	IRAM 2063	IRAM
Mains plug (BR type)	Shenzhen Xiekang Electric Co., Ltd	XK-09	AC 250 V 10 A	ABNT NBR NM 60884-1	Brazil Cert.
Mains plug (BR type) (alternative)	Lee Yuan Electrical Mfy. Ltd.	LY-11BR	AC 250 V 10 A	ABNT NBR NM 60884-1	Brazil Cert.
Mains plug (BR type) (alternative)	Various	Various	AC 250V, 10 A	ABNT NBR NM 60884-1	Brazil Cert.
Power cord	Shenzhen Bao Hing Electric Wire and Cable Manufacture Co., Ltd.	H03VVH2-F	2 x 0,75 mm^2	DIN VDE 0281-5: 02; HD 21.5 S3 + A1 + A2	
Power cord (alternative)	Mainland Electric Wire & Cable Co., Ltd	H03VVH2-F	2 x 0,75 mm^2	DIN VDE 0281-5: 02; HD 21.5 S3 + A1 + A2	

14	TABLE: list of critical components and materials				P
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Power cord (alternative)	Shenzhen Xie Jin Electronic Co., Ltd	H03VVH2-F	2 x 0,75 mm^2	DIN VDE 0281-5: 02; HD 21.5 S3 + A1 + A2	
Power cord (alternative)	Shenzhen Tongyuan Ind. Co., Ltd	H03VVH2-F	2 x 0,75 mm^2	DIN VDE 0281-5: 02; HD 21.5 S3 + A1 + A2	
Power cord (alternative)	Dongguan Licheng Electronics Co., Ltd	H03VVH2-F	2 x 0,75 mm^2	DIN VDE 0281-5: 02; HD 21.5 S3 + A1 + A2	
Power cord (alternative)	Various	H03VVH2-F	2 x 0,75 mm^2	DIN VDE 0281-5: 02; HD 21.5 S3 + A1 + A2; IEC 60227	S & other EU cert. marks
Power cord (AU type)	Shenzhen Bao Hing Electric Wire & Cable Manufacture Co., Ltd.	H03VVH2-F	2 x 0,75 mm^2	AS/NZS60227.5	Australia Cert.
Power cord (AU type) (alternative)	Mainland Electric Wire & Cable Co Ltd	H03VVH2-F	2 x 0,75 mm^2	AS/NZS60227.5	Australia Cert.
Power cord (AU type) (alternative)	Various	Various	2 x 0,75 mm^2	AS/NZS60227.5	Australia Cert.
Power cord (BR type)	Shenzhen Xie Jin Electronics C., Ltd.	H03VVH2-F	2 x 0,75 mm^2	IEC 60227-5	Brazil Cert.
Power cord (BR type) (alternative)	Lee Yuan Electrical Mfy. Ltd.	H03VVH2-F	2 x 0,75 mm^2	IEC 60227-5	Brazil Cert.
Plastic material of AC connector	Asahi Kasei Chemicals Corp.	1300S, 1300F	V-2, 75°C	IEC 60707	Tested with appliance
Plastic material of AC connector (alternative)	Asahi Kasei Chemicals Corp.	FG170	V-0, 105°C	IEC 60707	Tested with appliance
Plastic material of AC connector (alternative)	Toray Industries Inc	CM3004-V0	V-0, 130°C	IEC 60707	Tested with appliance

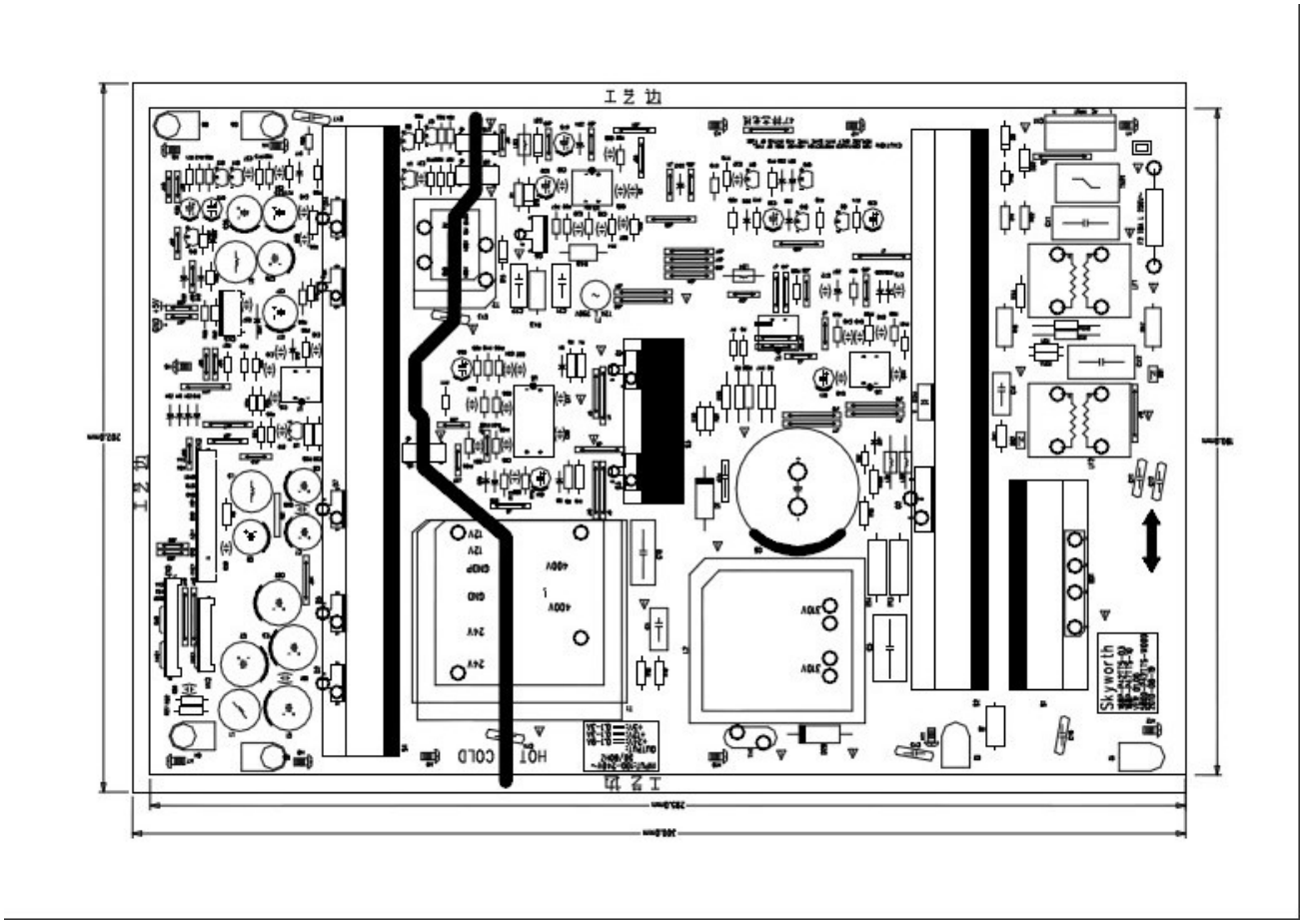
List of key parts

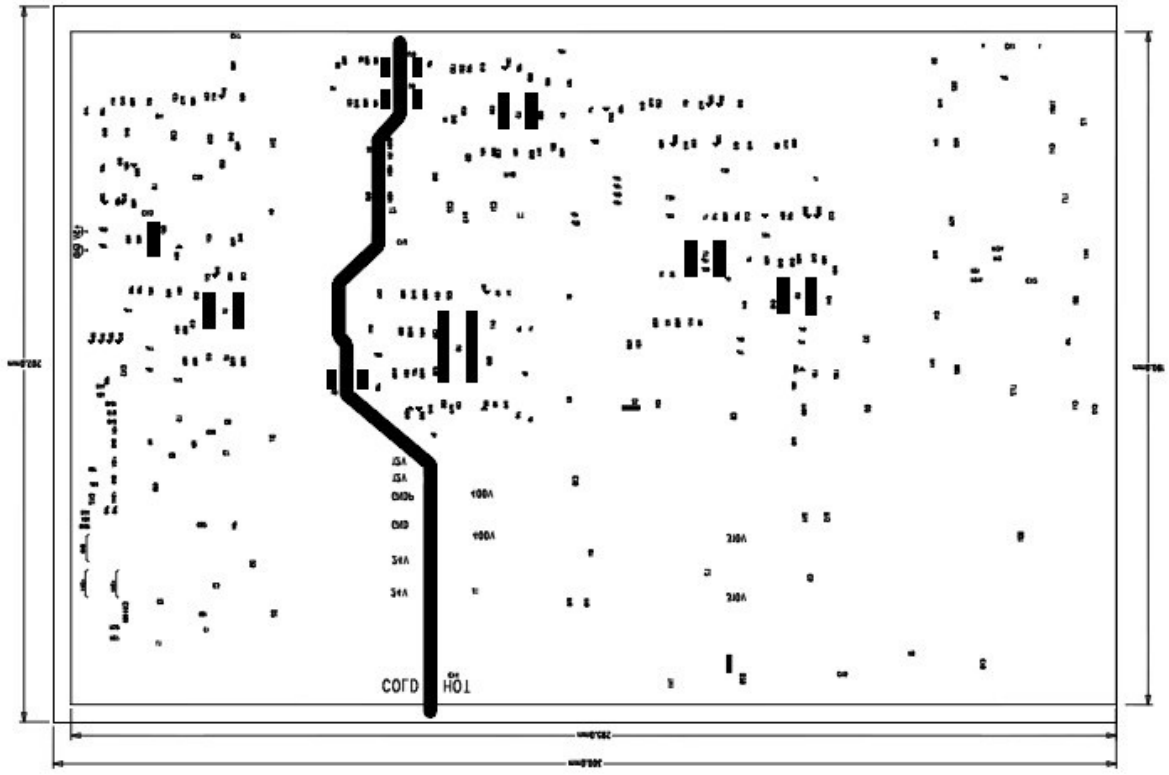
14	TABLE: list of critical components and materials				P
Component	Manufacturer/ trademark	Type/model	Value / rating	Standard	Approval/ Reference
Plastic material of AC connector (alternative)	Toray Industries Inc	3001-N, 3007	V-2, 105°C	IEC 60707	Tested with appliance
LCD panel	LG	LC420WUN	42 "		CB
LCD panel	LG	LC470WUN	47 "		
Main board	Various	Various	V-0, 105°C min.	UL 94 IEC 60707	S, ETL, UL & other EU Cert. marks
Power PCB	Zhuhai JinglihuaPCB Co., Ltd	94-VOD	V-0, 130°C	UL 94	UL (E249823)
Power PCB (alternative)	Various	Various	V-0, 105°C min.	UL 94 IEC 60707	S, ETL, UL & other EU Cert. marks
Plastic material of enclosure	Kingfa Sci. & Tech Co., Ltd	FRHIPS-113, FRHIPA-960	V-0, 50°C, Min. 1,7 mm thickness	IEC 60707	Tested with appliance
Plastic material of enclosure (alternative)	Cherl Industries Inc. Chemicals Div	VE-1877+	V-0, 50°C, Min. 1,7 mm thickness	IEC 60707	Tested with appliance
Plastic material of enclosure (alternative)	LG Chemical Ltd	40AFC, 405AF	V-0, 50°C, Min. 1,7 mm thickness	IEC 60707	Tested with appliance
Fuse link F1	XC Electronics (Shenzhen) Corp. Ltd.	5R-5H	T 2A, 250VAC	EN 60127-1, EN 60127-3	VDE 40020843
Fuse link F1	Littelfuse, Inc. Wickmann	328 series	T 2A, 250VAC	EN 60127-1, EN 60127-3	VDE 40018249
Fuse link F1(alternative)	Various	Various	T 2A, 250VAC	EN 60127-1, EN 60127-3	S & other EU Cert. marks
Fuse link F2	XC Electronics (Shenzhen) Corp. Ltd.	5T	T 8L, 250VAC	EN 60127-1, EN 60127-3	VDE 40009610
X-Capacitor CX1，CX2	Shenzhen Su Rong Capacitors	MPX	AC 300V, 220nF, 40/085/21/C, X2	IEC 60384-14	VDE (40018697)
X-Capacitor CX1，CX2 (alternative)	Wuxi Tongrong Electronics Co. Ltd.	MPX/MKP	AC 275V,220nF, 40/085/21/C, X2	IEC 60384-14	VDE 4008924
X-Capacitor CX1，CX2 (alternative)	Pilkor Electronics Ltd.	PCX2 335M	AC 275V, 220nF, 40/085/21/B, X2	IEC 60384-14	

14	TABLE: list of critical components and materials				P
Component	Manufacturer/ trademark	Type/model	Value / rating	Standard	Approval/ Reference
X-Capacitor CX1，CX2 (alternative)	Zhuhai Sung Ho Electronics Co., Ltd	CMPP	AC 275V, 220nF, 40/105/21/B, X2	IEC 60384-14	
Y-Capacitor CY1，CY2，CY4	Yinan Don;s Electric Component Co., Ltd	CT81	AC 250V, 470pF 25/125/21/C,Y1	IEC 60384-14	VDE (135256)
Y-Capacitor CY1，CY2，CY4 (alternative)	Guangdong South Hongming Electronic Science and Technology Co., Ltd	F	AC 250V, 470pF 25/125/21/C,Y1	IEC 60384-14	VDE (118357)
Y-Capacitor CY1，CY2， CY4 (alternative)	Jyh Chung Electronic Co., Ltd	JD	AC 250V, 470pF 30/125/21/C,Y1	IEC 60384-14	VDE (40016598)
Y-Capacitor CY3，CY5	Yinan Don;s Electric Component Co., Ltd	CT81	AC 250V, 1000pF 25/125/21/C,Y1	IEC 60384-14	VDE (135256)
Y-Capacitor CY3，CY5 (alternative)	Guangdong South Hongming Electronic Science and Technology Co., Ltd	F	AC 250V, 1000pF 25/125/21/C,Y1	IEC 60384-14	VDE (118357)
Y-Capacitor CY3，CY5 (alternative)	Jyh Chung Electronic Co., Ltd	JD	AC 250V, 1000pF 30/125/21/C,Y1	IEC 60384-14	VDE (40016598)
Optocoupler U8,U9,U10	Sharp Corporation Electronic Components Group	PC817,	Int. CR / Ext. Cr / Dti: 6,4 / 6,4 / > 0,4 mm	DIN EN 60747-5-2 (VDE 0884 Teil 2): 2003	VDE (40008087)
Optocoupler U8,U9,U10 (alternative)	Toshiba Corporation	TLP781,	Int. CR / Ext. Cr / Dti: 6,5 / 8,0 / > 0,4 mm	DIN EN 60747-5-2 (VDE 0884 Teil 2)	VDE (40021173)
Optocoupler U8,U9,U10 (alternative)	Bright Led Electronics Corp.	BPC-817B			VDE 40007240
Surge suppression varistor TNR1	Centra Science Corp.	CNR-14D561K	560 V	IEC 61051-2	VDE 4008220
Surge suppression varistor TNR1 (alternative)	Thinking Electronic Industrial Co.,Ltd	TVR14561KSY	560V	IEC 61051-2	
Surge suppression varistor TNR1 (alternative)	Xianhua Advanced Sensitive Components Co., Ltd.	FNR-14K561			

List of key parts

14	TABLE: list of critical components and materials				P
Component	Manufacturer/ trademark	Type/model	Value / rating	Standard	Approval/ Reference
NTC TH1	Thinking Electronic Industrial Co., Ltd	SCK205R0	--5 欧姆	EN 60539-1 EN 60730-1	TUV R 5005015
NTC TH1 (alternative)	Jiangsu Xingshun Electronics Co., Ltd	5D2-10	--5 欧姆	EN 60539-1 EN 60730-1	VDE (40019309)
Line filter LF1,LF2	Skyworth	SKY-LCL-ET28E	10mH X 2	IEC/EN 60065	
Bobbin of line filter	Chang Chun Plastics Co., Ltd	T375J	V-0, 150 °C	IEC 60707	
Mains transformer T1	Haining Lianfeng Dongjin Electronics Co., Ltd	BCK-150-4947	--		
Tube of mains transformer T2	Haining Lianfeng Dongjin Electronics Co., Ltd	BCK-30-L02501			
1) an asterisk indicates a mark which assures the agreed level of surveillance.					

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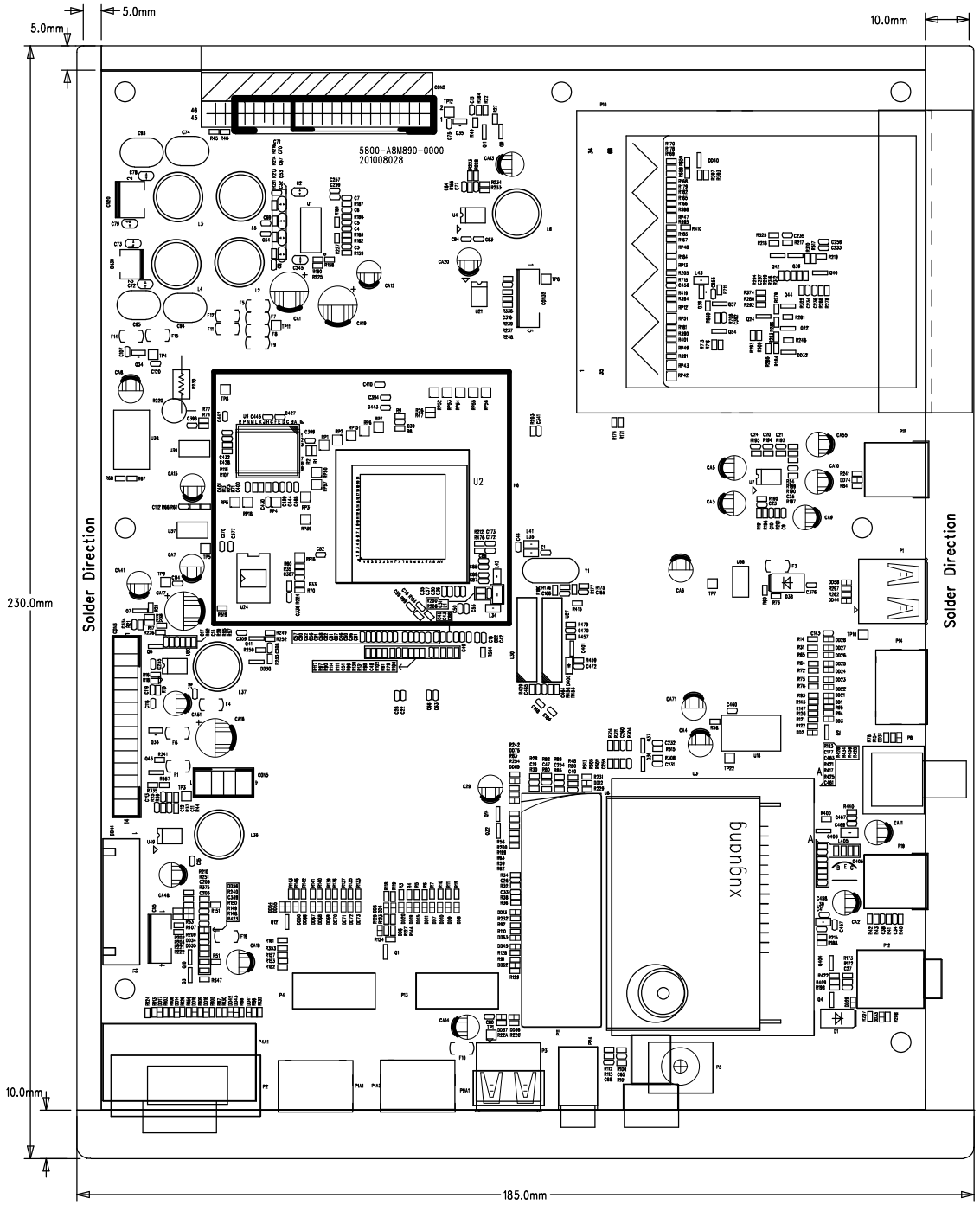
HOT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5.0mm
10.0mm
230.0mm
10.0mm
185.0mm
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Solder Direction
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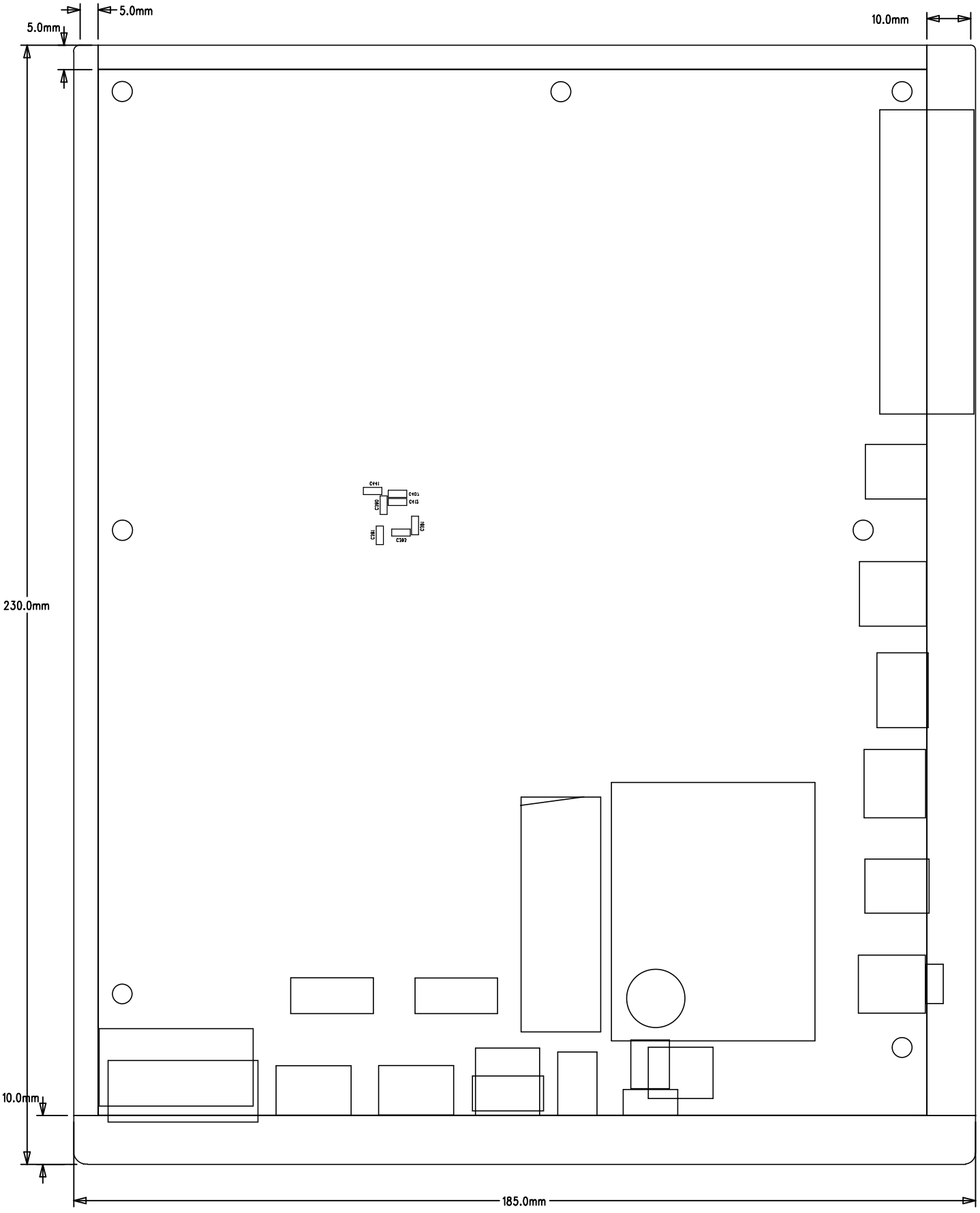
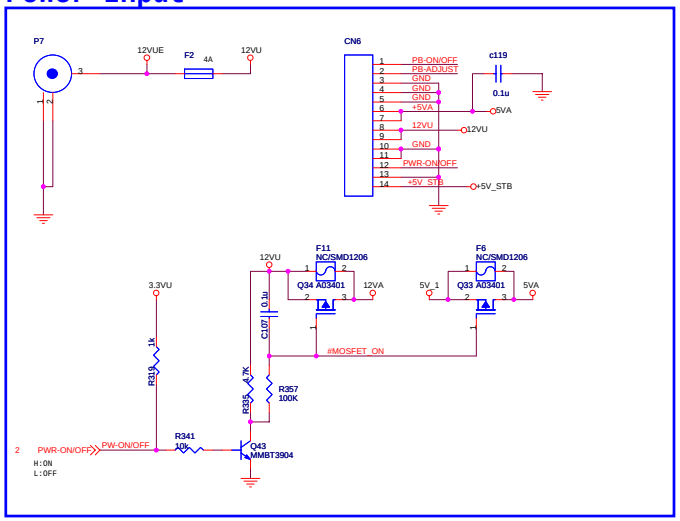
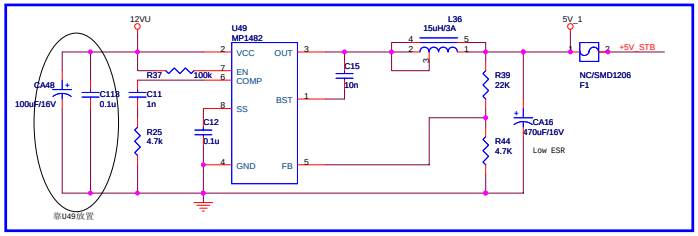
201008028
U2
guangx

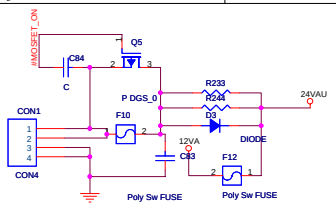

5.0mm
5.0mm
10.0mm
230.0mm
10.0mm
185.0mm

Power Input

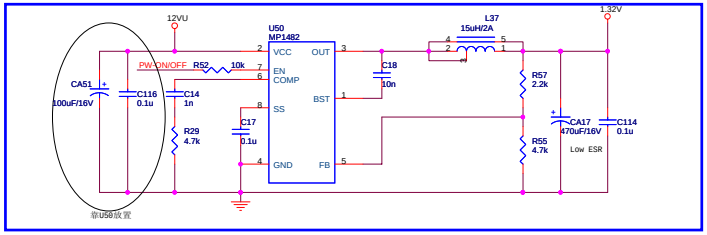


5V DC-DC

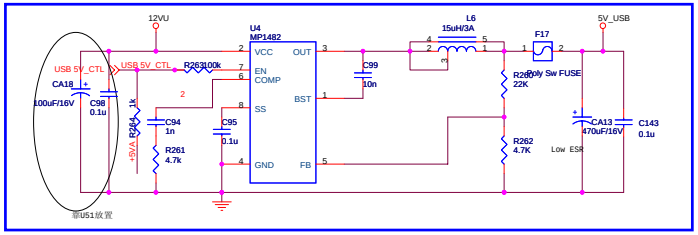




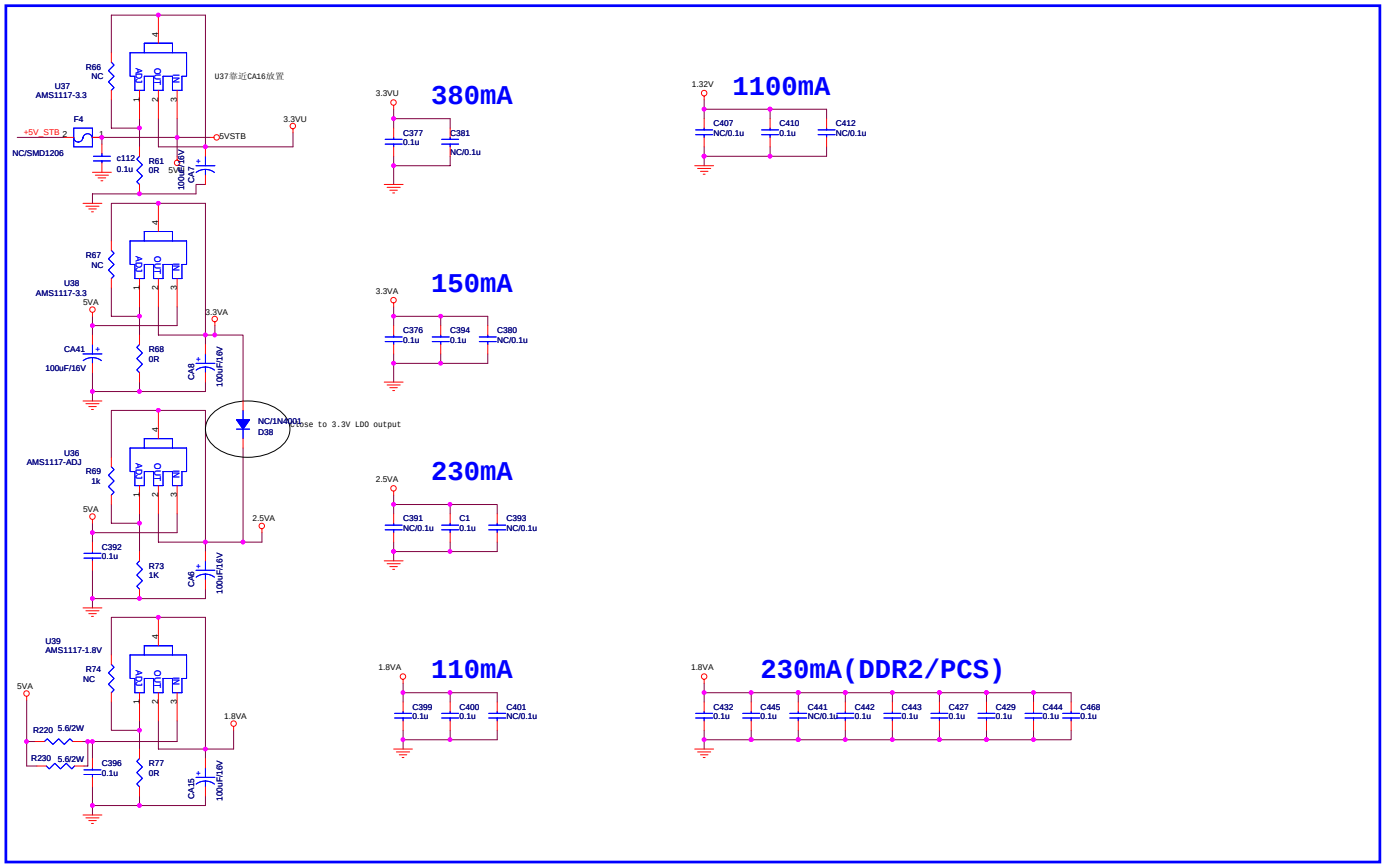
1.32V DC-DC



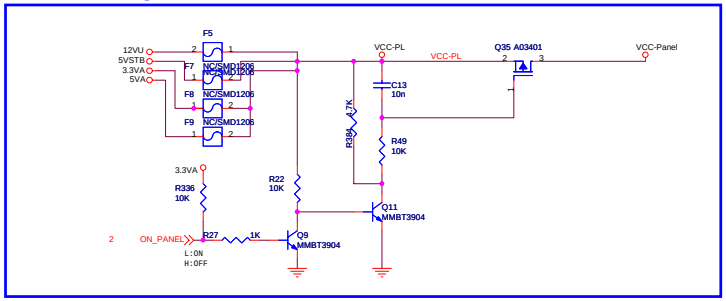
USB5V DC-DC



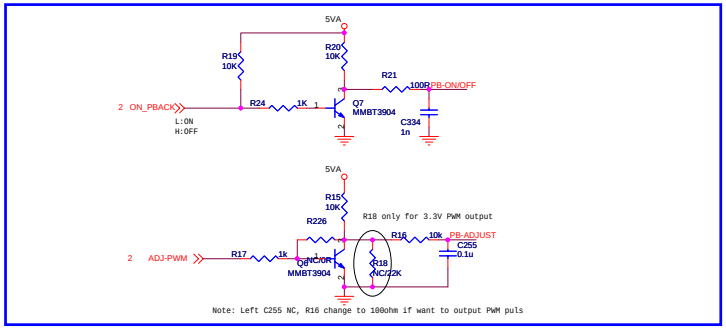
MST Power supply



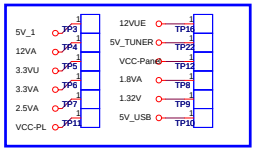
PANEL POWER



Inverter Interface



Power Test Point



Title	POWER		
Size	Document Number		Rev 1.0
Date:	Tuesday, October 26, 2010	Sheet 1	10

靠近MSD306放置

靠近MSD306放置

靠近MSD306放置

靠近MSD306放置

LVDS CONNECTOR

FLASH

KEY

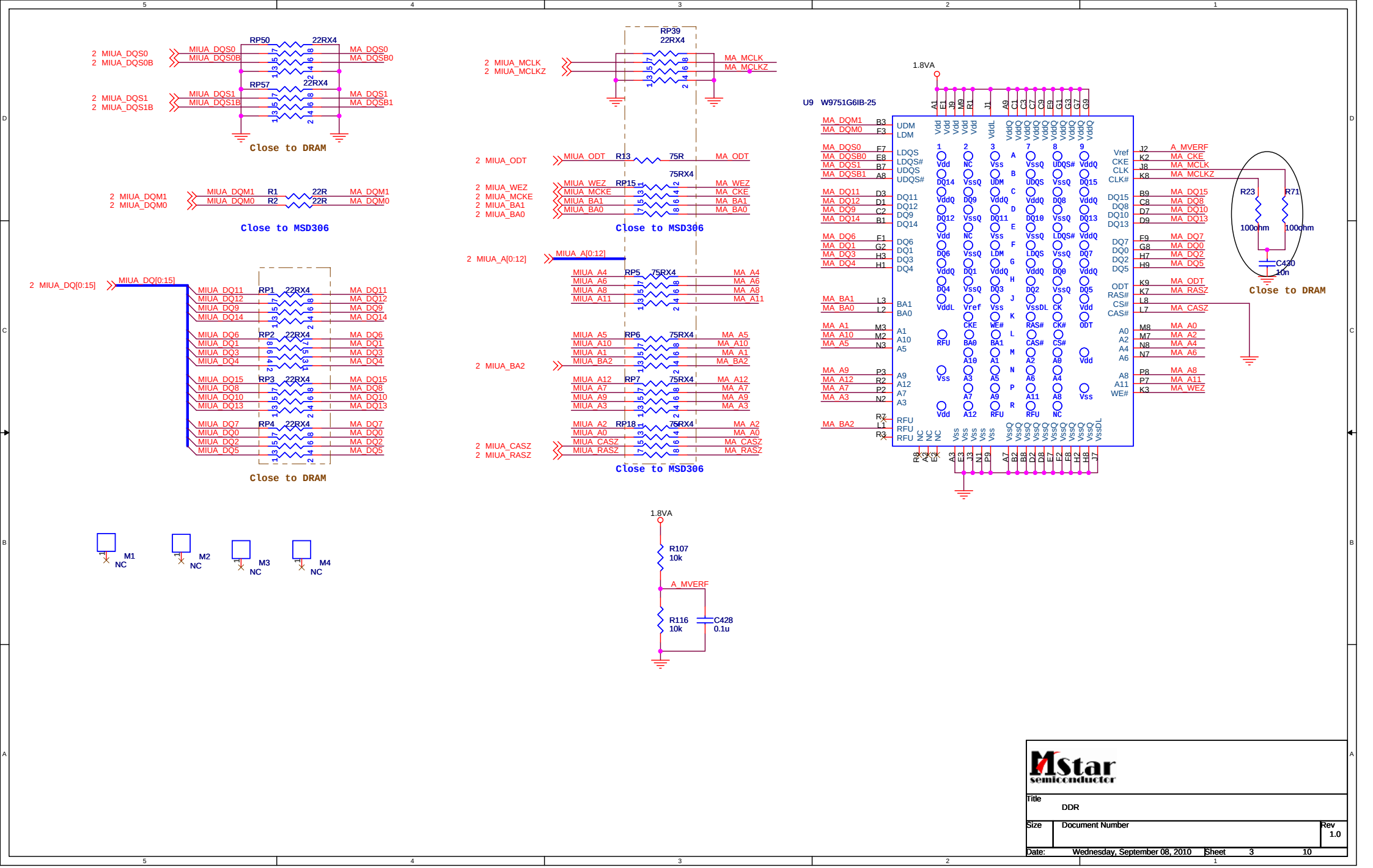
RESET

PCMCIA IO

Mode Selection

DEBUG PORT

Title	MSD306
Size	Document Number / Rev 1.0
Date: Thursday, October 28, 2010	Sheet 2 10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MA_DQS1
MA_DQSB1
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RP39
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MA_MCLK
MA_MCLKZ
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MIUA_ODT
R13
75R
MA_ODT
75RX4
RP15
2 MIUA_WEZ
2 MIUA_MCKE
2 MIUA_BA1
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MIUA_BA0
MA_WEZ
MA_CKE
MA_BA1
MA_BA0
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M3
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M4
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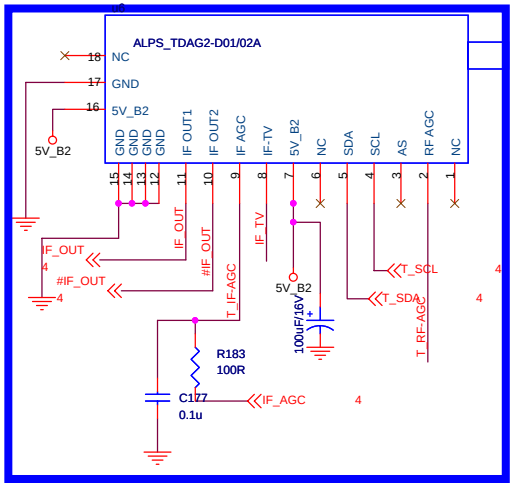
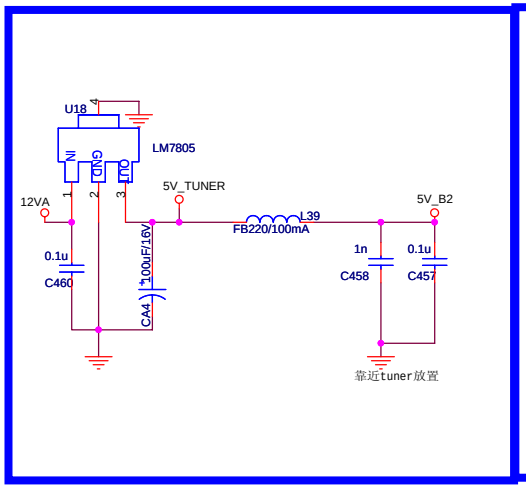
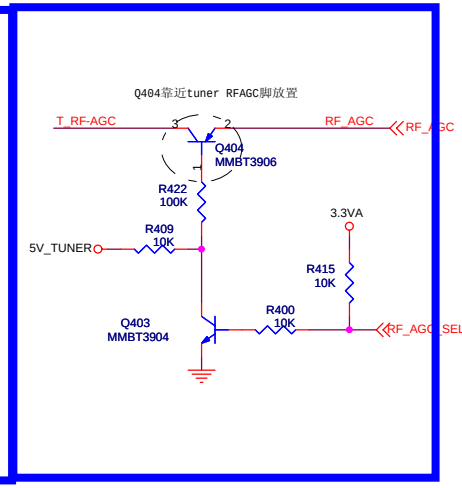
TUNER

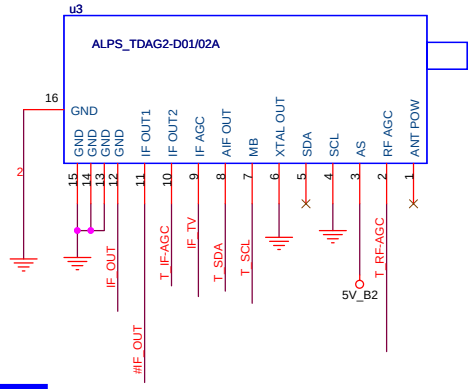


TUNER POWER

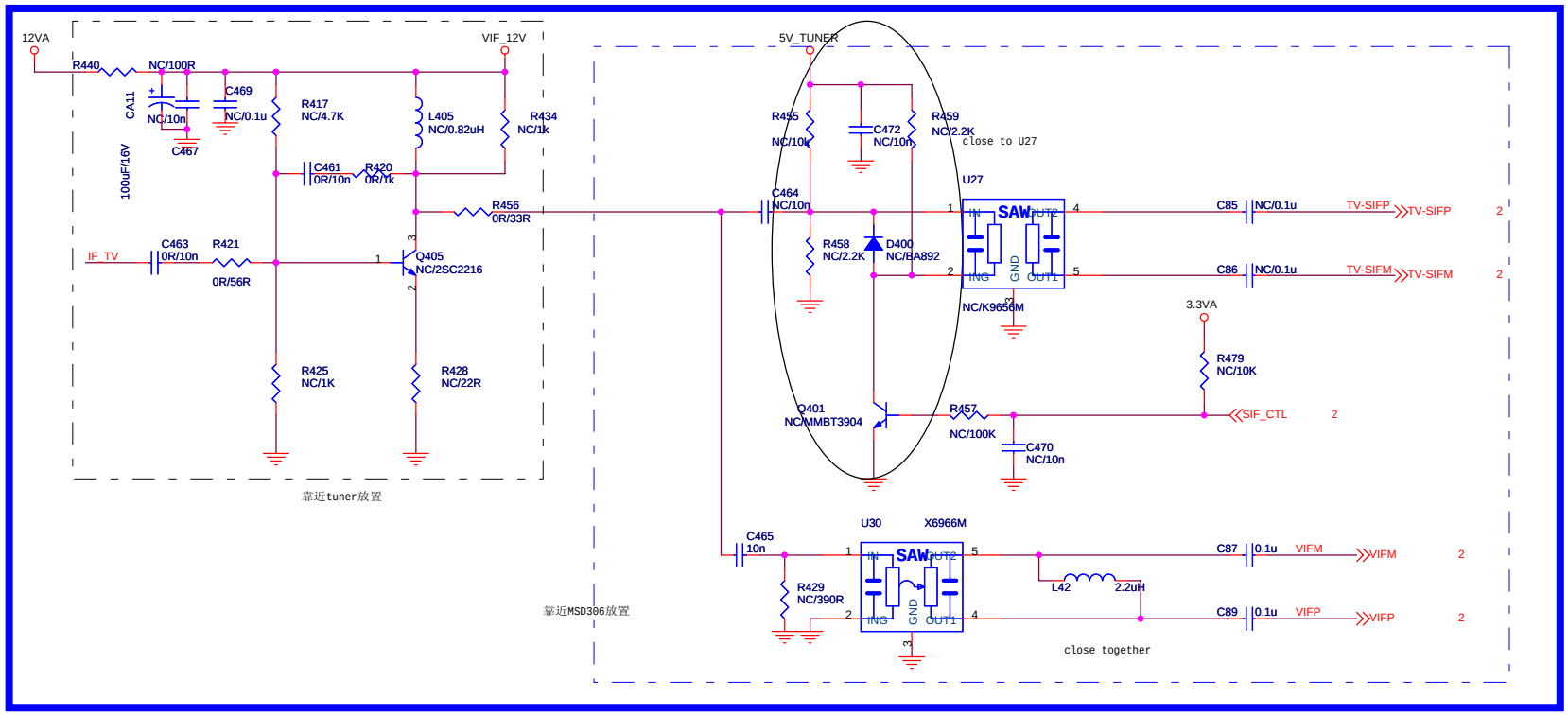


RF AGC Switch





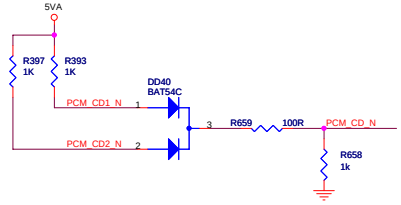
SAW Drive



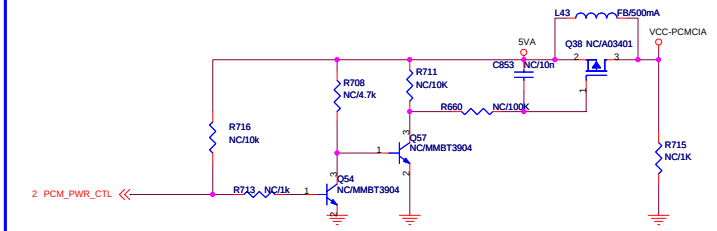
MStar semiconductor

Title	TUNER	
Size	Document Number	Rev 1.0
Date: Tuesday, October 26, 2010	Sheet 4	10

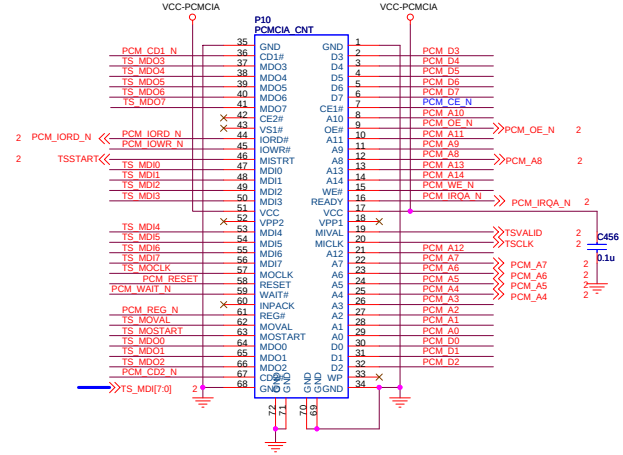
CARD DETECT



PWR CTRL



PCMCIA Connector



Title	PCMCIA		
Size	Document Number		Rev 1.0
Date:	Wednesday, September 08, 2010	Sheet 5	10

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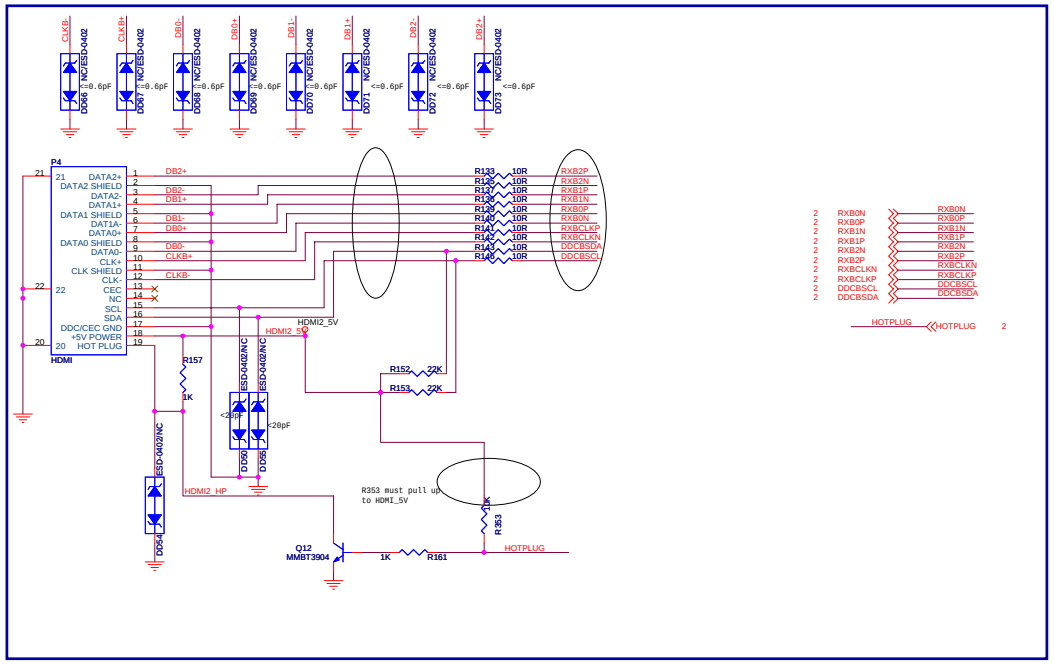

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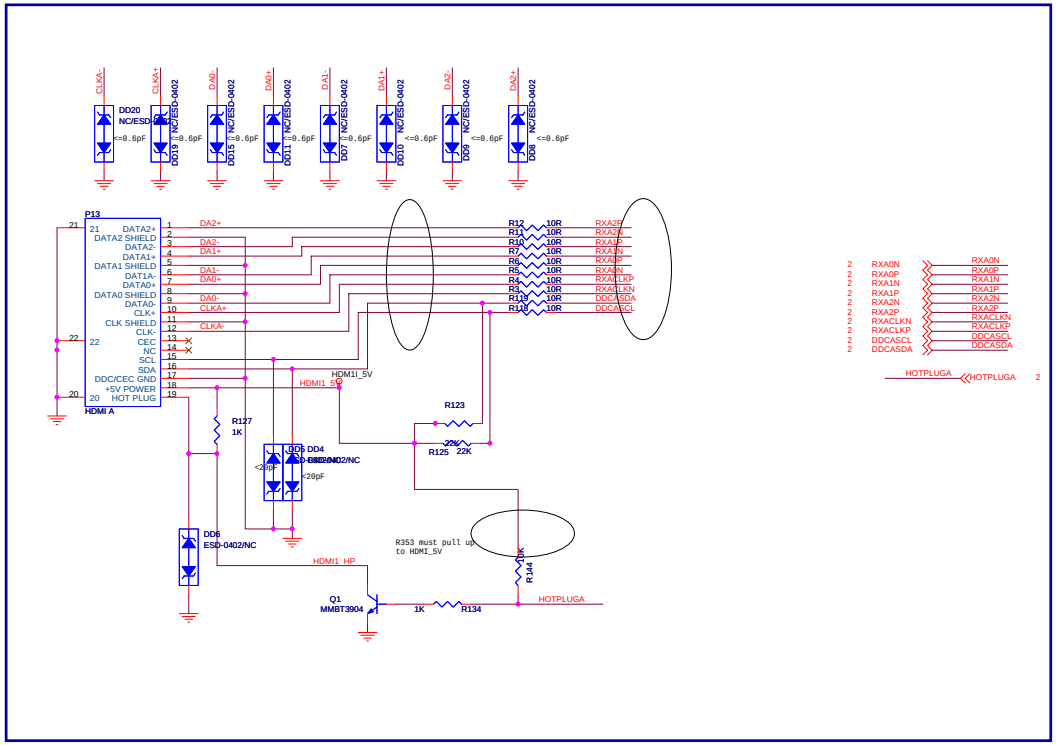

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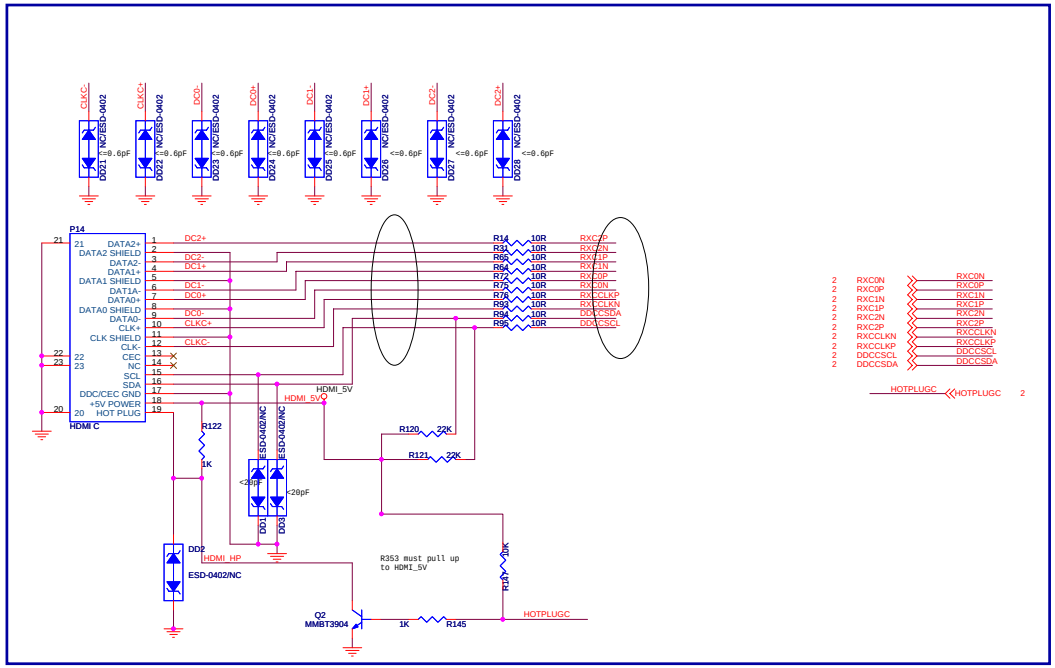
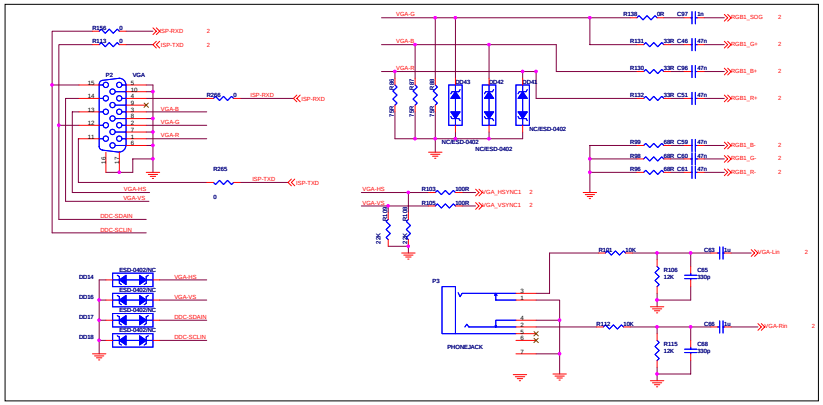


Title	HDMI	
Size	Document Number	Rev 1.0
Date:	Tuesday, October 26, 2010	Sheet 6 10

VGA INPUT



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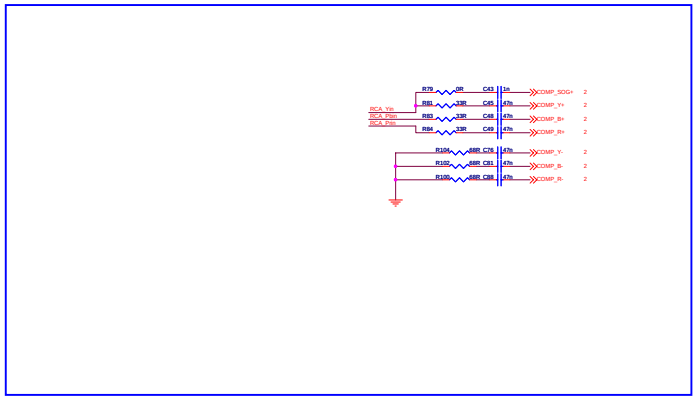
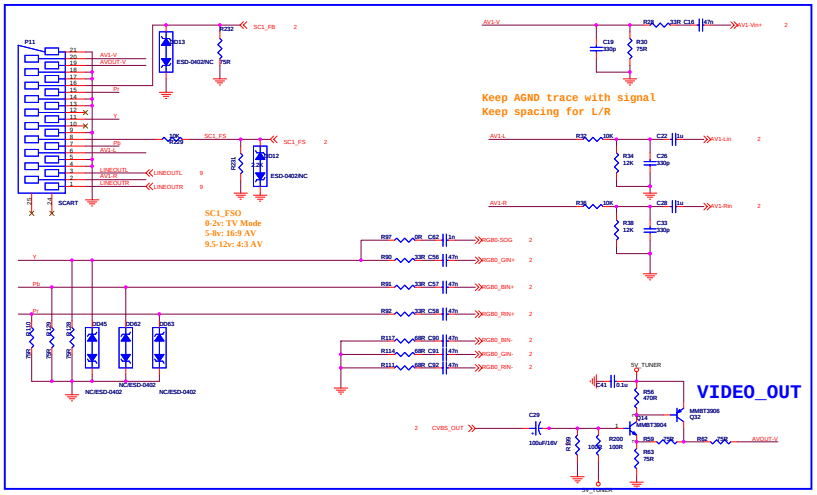
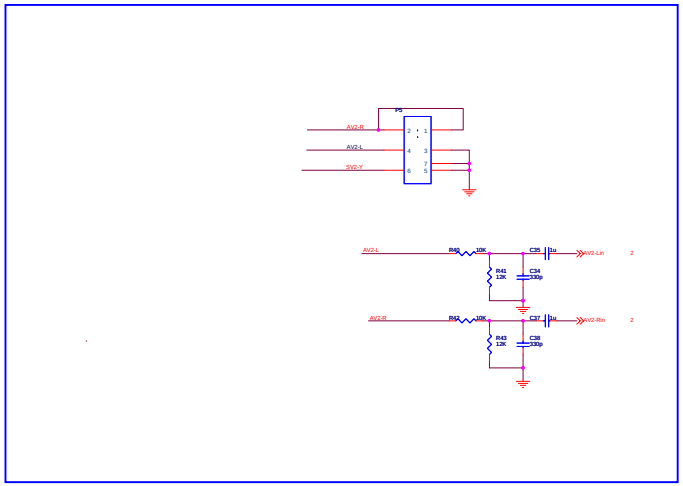


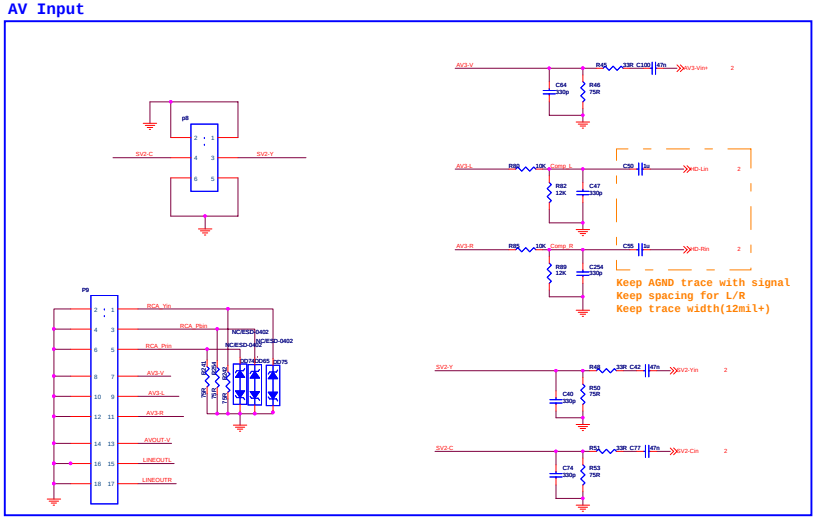
SCART



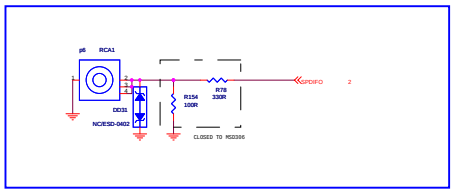
SIDE AV IN(Optional)



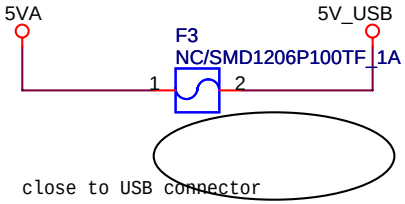
AV Input

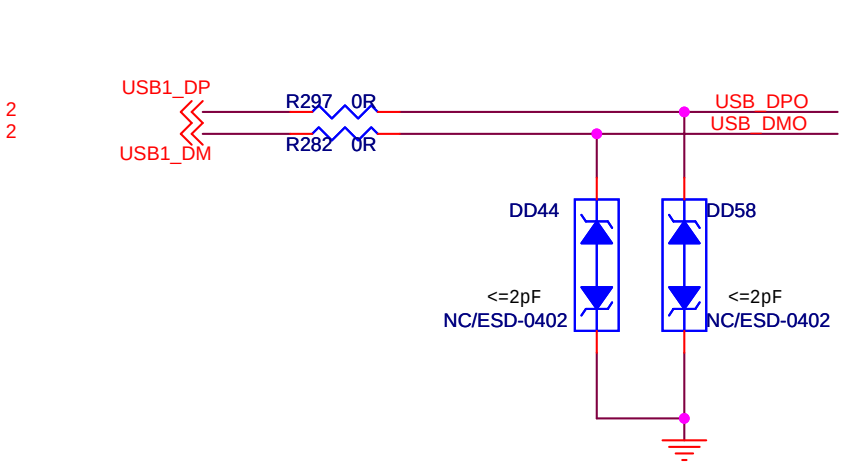


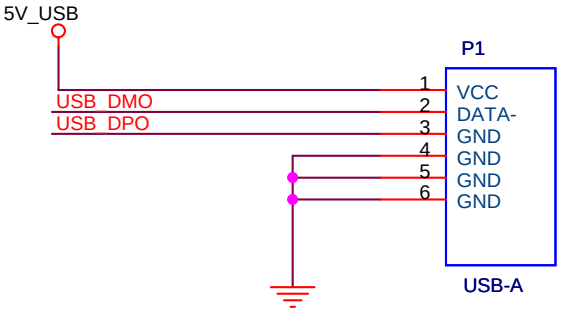
SPDIF Output



		File	AVIN
Size	Document Number		Rev 1.0
Date:	Thursday, October 28, 2010	Sheet 7	of 19

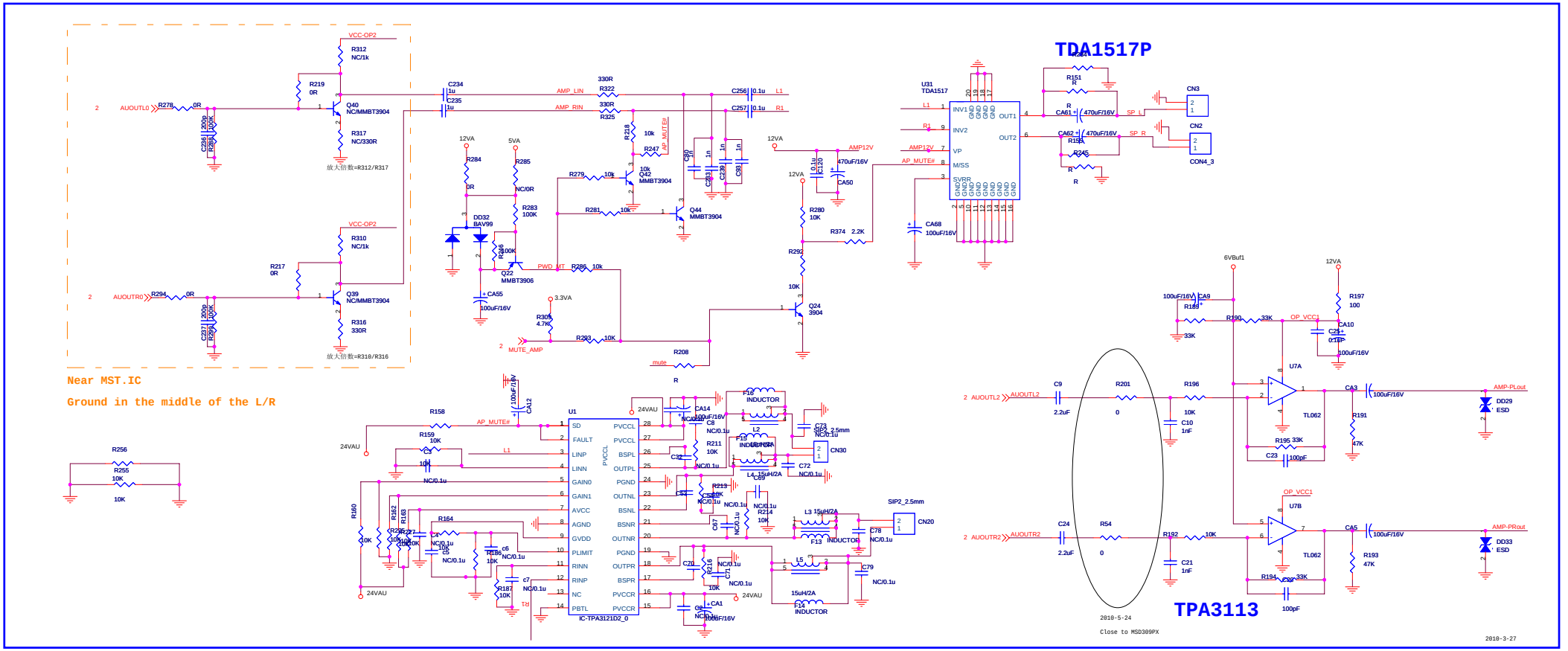


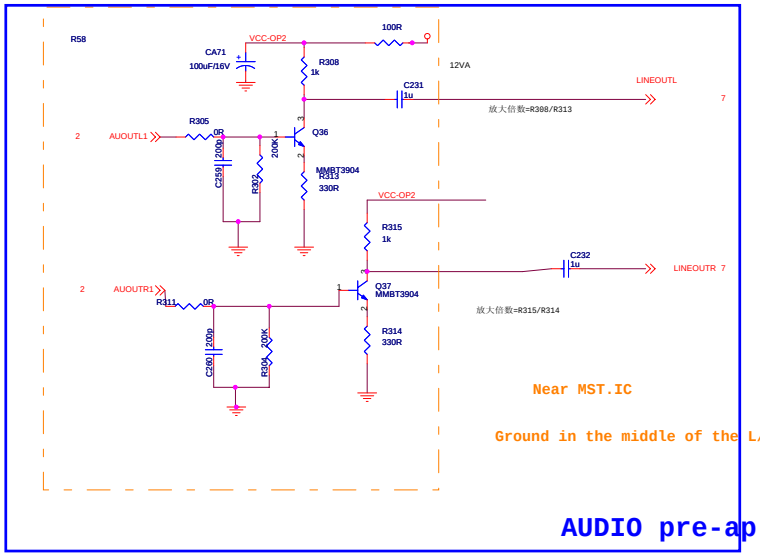


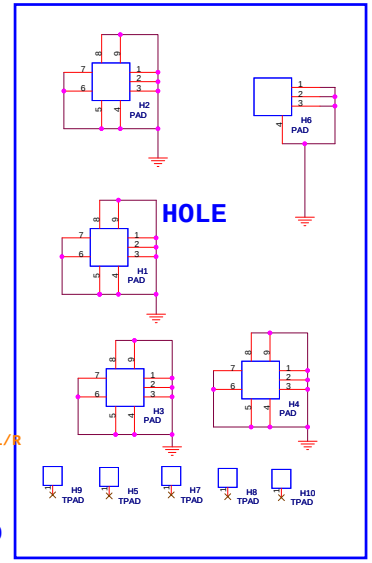


Title: USB		
Size	Document Number	Rev 1.0
Date: Wednesday, September 08, 2010	Sheet 8	10

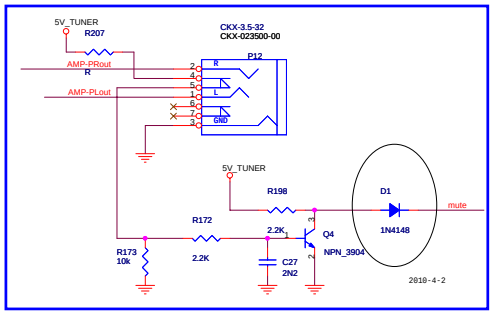
AUDIO AMP.







HeadPhone Out



Title	AUDIO	
Size	Document Number	Rev 1.0
Date: Tuesday, October 26, 2010	Sheet 9	10

1.Summary:

LCD TV including LCD TV sets and computer displays ,It's a high display quality and small size, light weight and good at the same time with power-saving features and no radiation

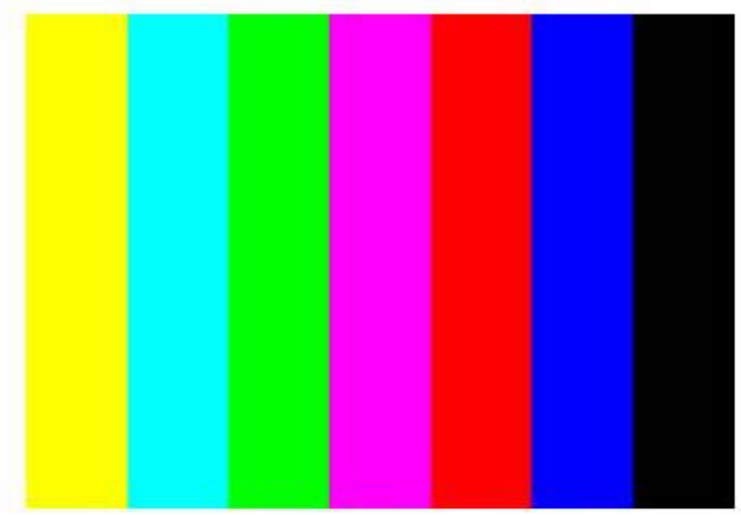
2.Method of entering factory menu

Method : Press SOURCE button, then press 2580.

3. ADC Adjust Method:

1) YPbPR Source

Input 100% color bar pattern signal, select AUTOTUNE item, Press ⇨ button to auto adjust the ADC value, when show “OK” finished.



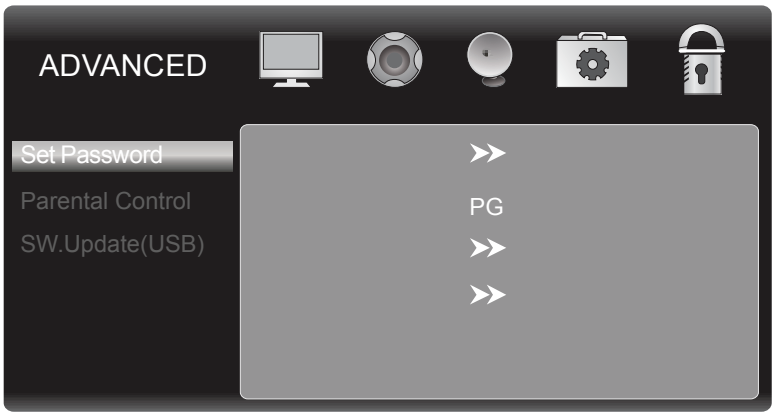
2)VGA Source:

Input tessellated white - black signal, select AUTOTUNE item, press ⇨ button to auto adjust the ADC value, when show “OK” finished.

Mstar Release C
Mstar Sem

Software Update(USB)

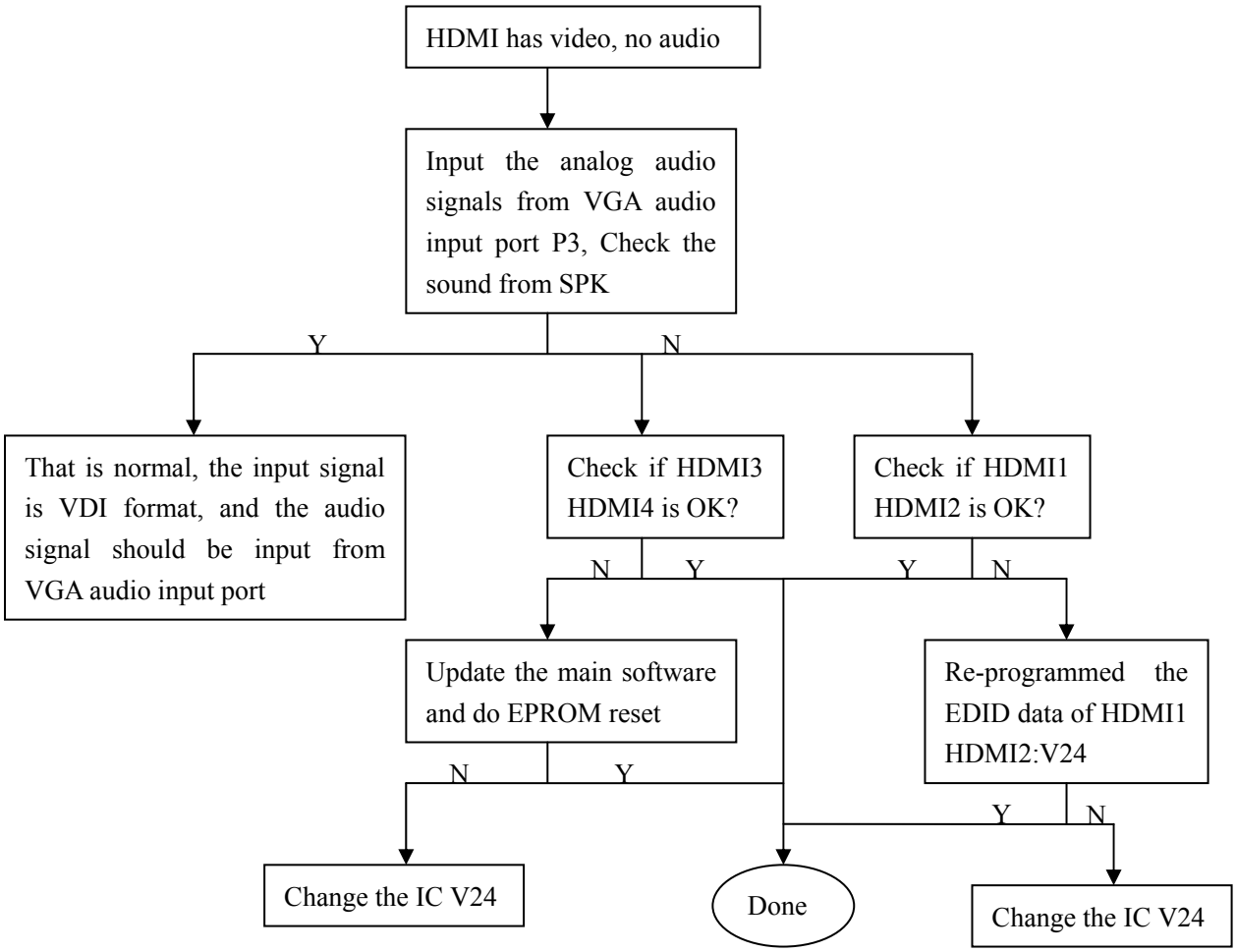
1. In the TV Mode, Press “MENU” button, the press “ ▶ ” button to ADVANCED.

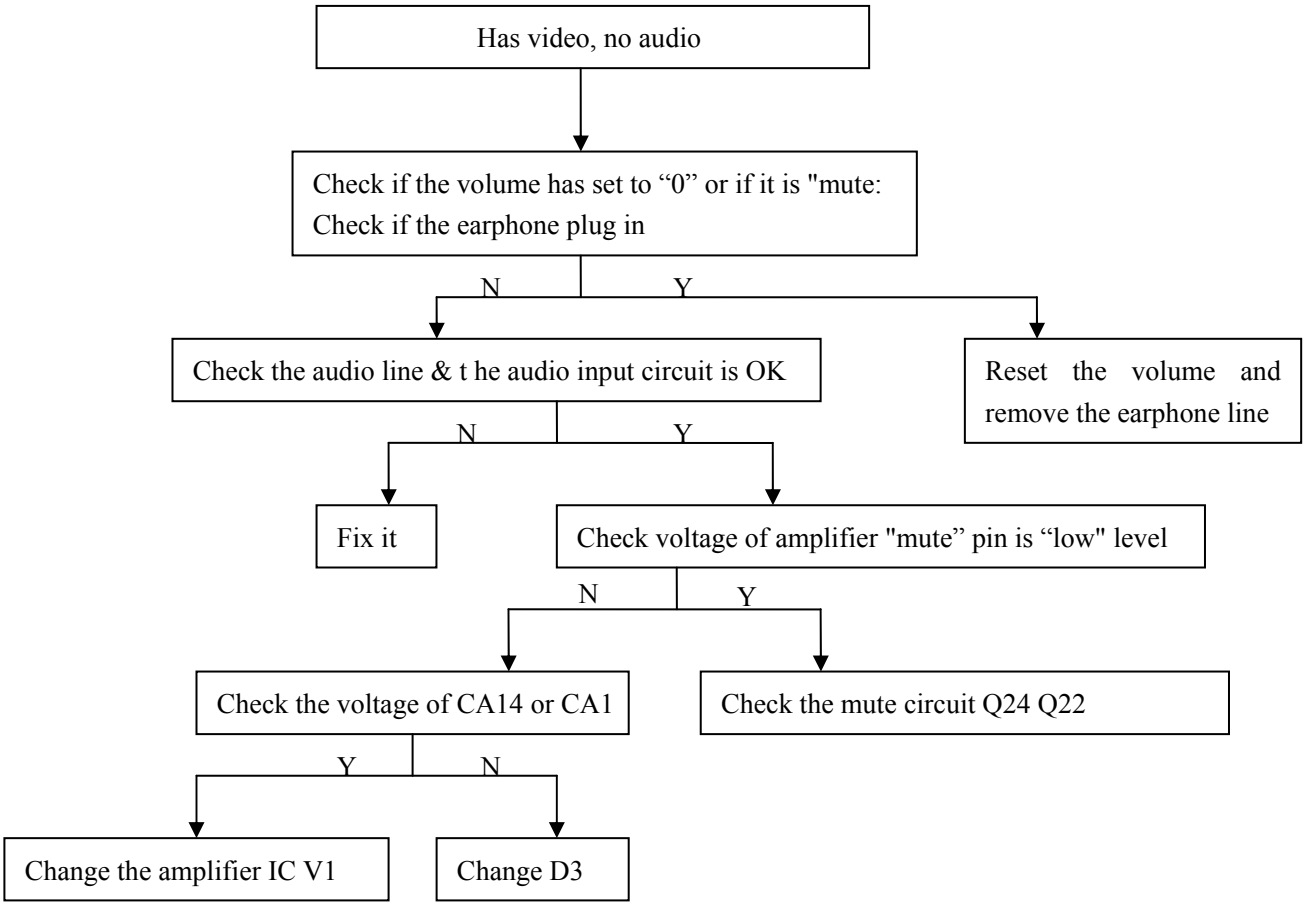


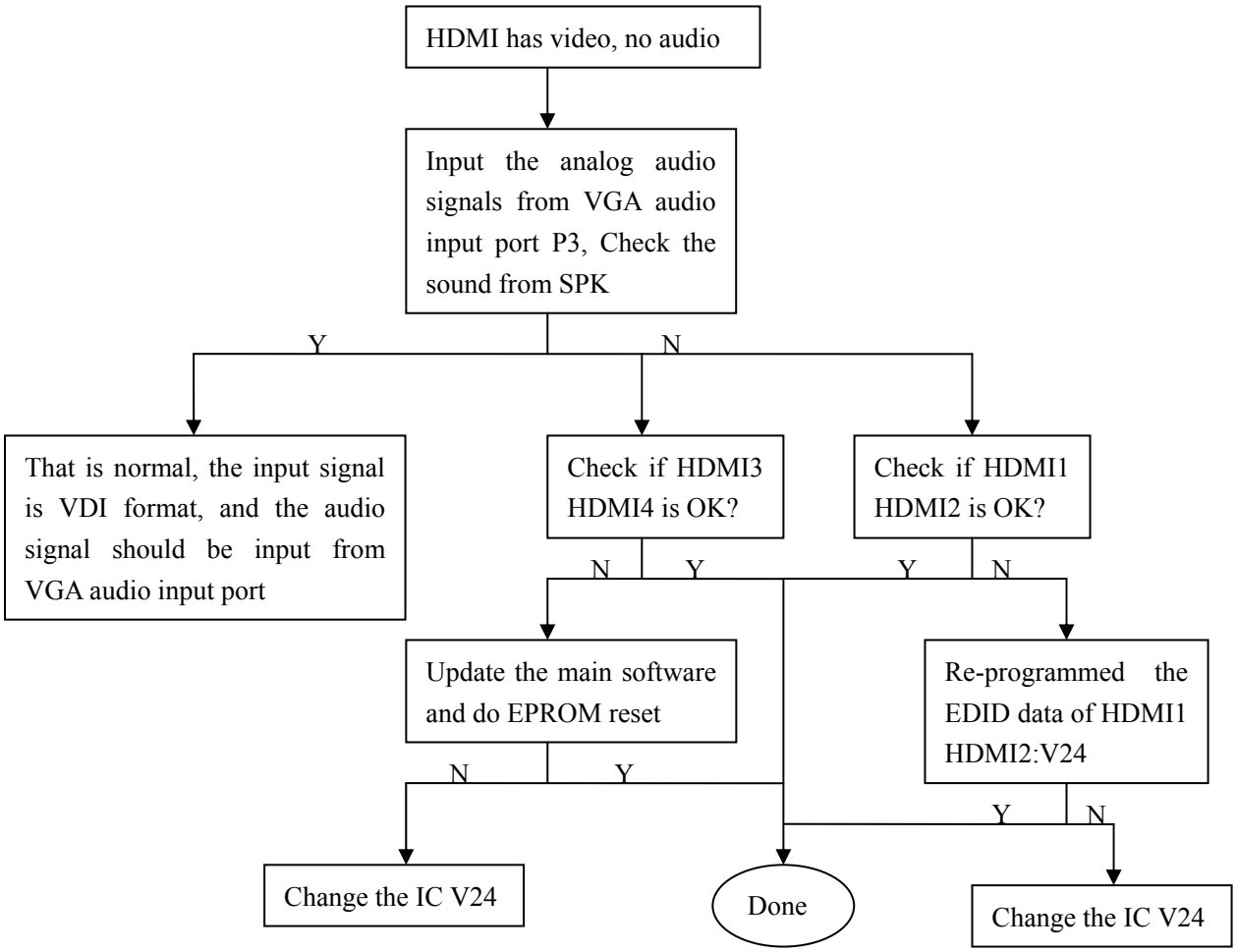
2. Press “ ▼ ” button, Input the password “0000”.

3. Press “ ▼ ” button, Select the SW.Update(USB), Press “OK”button.

4. Press “ ◀ ” (Yes) button, the please wait for 1 minute.


HDMI has video, no audio
Input the analog audio signals from VGA audio input port P3, Check the sound from SPK
Y
N
That is normal, the input signal is VDI format, and the audio signal should be input from VGA audio input port
Check if HDMI3 HDMI4 is OK?
Check if HDMI1 HDMI2 is OK?
N
Y
Y
N
Update the main software and do EPROM reset
Re-programmed the EDID data of HDMI1 HDMI2:V24
N
Y
Y
N
Change the IC V24
Done
Change the IC V24


Has video, no audio
Check if the volume has set to “0” or if it is "mute:
Check if the earphone plug in
N
Y
Check the audio line & t he audio input circuit is OK
Reset the volume and remove the earphone line
N
Y
Fix it
Check voltage of amplifier "mute” pin is “low" level
N
Y
Check the voltage of CA14 or CA1
Check the mute circuit Q24 Q22
Y
N
Change the amplifier IC V1
Change D3


HDMI has video, no audio
Input the analog audio signals from VGA audio input port P3, Check the sound from SPK
Y
N
That is normal, the input signal is VDI format, and the audio signal should be input from VGA audio input port
Check if HDMI3 HDMI4 is OK?
Check if HDMI1 HDMI2 is OK?
N
Y
Y
N
Update the main software and do EPROM reset
Re-programmed the EDID data of HDMI1 HDMI2:V24
N
Y
Y
N
Change the IC V24
Done
Change the IC V24